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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ECUADOR

WATER AND SANITATION PROGRAM FOR THE CANTON OF CUENCA

(EC-L1297)

LOAN PROPOSAL

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LINKS

REQUIRED:

1. Multiyear execution plan/Annual work plan
2. Monitoring and evaluation plan
3. Environmental and social review summary
4. Procurement plan

OPTIONAL:

1. Economic feasibility
2. Technical feasibility
3. Financial viability
4. Climate change analysis
5. Public Utilities Policy analysis
6. Gender and diversity analysis
7. Theory of change
8. Analysis of ETAPA business management
9. Program Operating Regulations

ABBREVIATIONS

BDE	Development Bank of Ecuador
CAF	Development Bank of Latin America and the Caribbean
CEPLAES	Centro de Planificación y Estudios Sociales (Center for Planning and Social Studies)
CGE	Office of the Comptroller General of Ecuador
CO_2	Carbon dioxide
CQS	Selection based on the consultants' qualifications
EBITDA	Earnings before interest, taxes, depreciation, and amortization
EIB	European Investment Bank
EIRR	Economic internal rate of return
ESMP	Environmental and Social Management Plan
ESPF	Environmental and Social Policy Framework
ESPS	Environmental and Social Performance Standards
ETAPA EP	Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca
GADM	Municipal Decentralized Autonomous Government
ICB	international competitive bidding
IMF	International Monetary Fund
l/s	Liters per second
LGBTQ+	Lesbian, gay, bisexual, trans, queer, and other
m^3	Cubic meters
MAATE	Ministry of Environment, Water, and Ecological Transition
MDBs	Multilateral development banks
NDC	Nationally Determined Contribution
NTUs	Nephelometric turbidity units
QCBS	Quality- and cost-based selection
SCADA	Supervisory Control and Data Acquisition
SOFR	Secured Overnight Financing Rate

PROJECT SUMMARY

ECUADOR
WATER AND SANITATION PROGRAM FOR THE CANTON OF CUENCA
(EC-L1297)

<table>
<tr><th colspan="5">Financial Terms and Conditions</th></tr>
<tr><td colspan="3">Borrower:</td><td colspan="2">Flexible Financing Facility[a]</td></tr>
<tr><td colspan="3">Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA EP)</td><td>Amortization period:</td><td>25 years</td></tr>
<tr><td colspan="3">Guarantors:</td><td>Disbursement period:</td><td>5 years</td></tr>
<tr><td colspan="3">Republic of Ecuador and the Municipal Decentralized Autonomous Government (GADM) of the Canton of Cuenca</td><td rowspan="2">Grace period:</td><td rowspan="2">5.5 years[b]</td></tr>
<tr><td colspan="3">Executing agency:</td></tr>
<tr><td colspan="3">ETAPA EP</td><td rowspan="2">Interest rate:</td><td rowspan="2">SOFR-based</td></tr>
<tr><td>Source</td><td>Amount (US$)</td><td>%</td></tr>
<tr><td rowspan="2">IDB (Ordinary Capital)</td><td rowspan="2">70,000,000</td><td rowspan="2">75.3</td><td>Credit fee:</td><td>[c]</td></tr>
<tr><td>Inspection and supervision fee:</td><td>[c]</td></tr>
<tr><td>Local:</td><td>23,000,000</td><td>24.7</td><td>Weighted average life:</td><td>15.25 years</td></tr>
<tr><td>Total:</td><td>93,000,000</td><td>100.0</td><td>Approval currency:</td><td>U.S. dollar</td></tr>
<tr><th colspan="5">Project at a Glance</th></tr>
<tr><td colspan="5">Project objective/description: The general objective is to promote the sustainability of water and sanitation service delivery in the canton of Cuenca, with a climate action and natural capital protection approach. The specific objectives are to: (i) enhance the resilience and reliability of the water system in the canton of Cuenca and help conserve water sources; (ii) expand water and sewerage coverage in the canton’s rural areas; (iii) improve efficiency and capacity in relation to wastewater treatment and final disposal in the Ucubamba-Guangarcucho system; and (iv) improve the management of services provided by ETAPA EP, incorporating a gender, diversity, and climate change approach.</td></tr>
<tr><td colspan="5">Special contractual conditions precedent to the first disbursement of the loan: (i) a program execution unit will be set up within ETAPA EP, reporting to the General Manager, with the following technical team appointed or hired to work exclusively on the program: manager of the program execution unit, infrastructure project lead, institutional project lead, procurement lead, administrative/financial lead, social/environmental lead, and monitoring and control lead; and (ii) the Program Operations Regulations will be approved and in force, under the terms previously agreed upon with the Bank, will reflect the environmental and social requirements, and will incorporate as annexes the Environmental and Social Management System, the Environmental and Social Management Plan, and the Environmental and Social Action Plan (paragraph 3.5).

Special contractual conditions for execution: See Annex B to the Environmental and Social Review Summary (required link 3).</td></tr>
<tr><td colspan="5">Exceptions to Bank policies: A partial waiver of the policy on guarantees (OP-303) is requested, such that the Municipal Decentralized Autonomous Government (GADM) of the Canton of Cuenca would guarantee only performance obligations and not the local counterpart contribution (paragraph 3.3).</td></tr>
</table>

Strategic Alignment							
Objectives:[d]	O1 ☒			O2 ☒		O3 ☐	
Operational focus areas:[e]	EO1 ☒	EO2-G ☒ EO2-D ☒	EO3 ☒	EO4 ☐	EO5 ☒	EO6 ☒	EO7 ☐

(a) Under the terms of the Flexible Financing Facility (FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency, interest rate, commodity, and catastrophe protection conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

(b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted, provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

(c) The credit fee and the inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with applicable policies.

(d) O1 (Reduce poverty and inequality); O2 (Address climate change); and O3 (Bolster sustainable regional growth).

(e) EO1 (Biodiversity, natural capital, and climate action); EO2-G (Gender equality); EO2-D (Inclusion of diverse population groups); EO3 (Institutional capacity, rule of law, and citizen security); EO4 (Social protection and human capital development); EO5 (Productive development and innovation through the private sector); EO6 (Sustainable, resilient, and inclusive infrastructure); EO7 (Regional integration).

I. Description and Results Monitoring

A. Background, problem addressed, and rationale

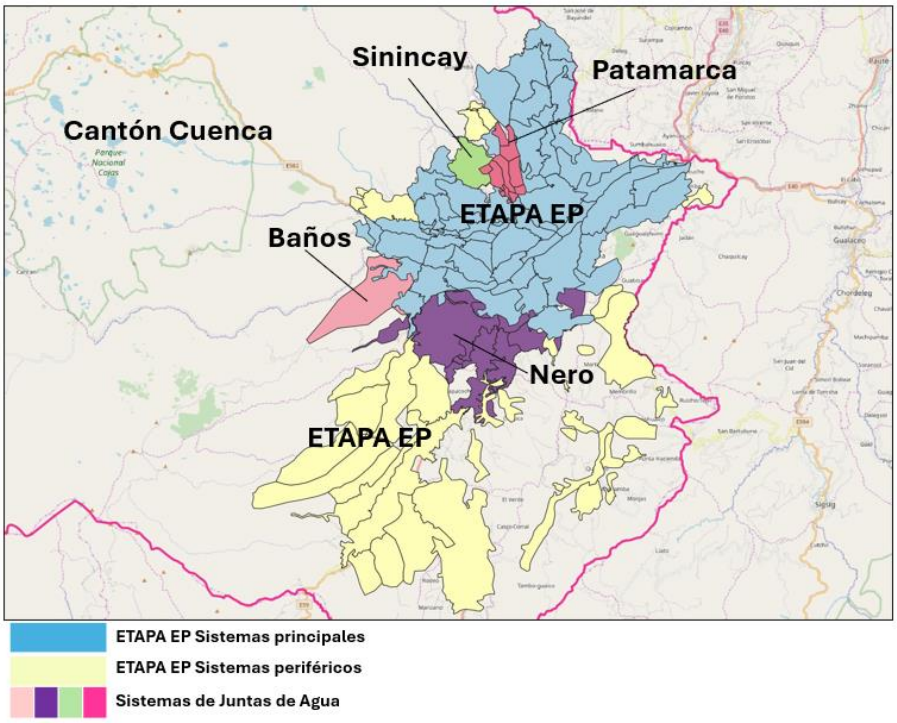
1.1 **Macroeconomic context.** Ecuador's economy is open, small, dollarized, and highly oil-dependent, and therefore significantly exposed to external shocks. From 2020 to 2022, the country made temporary progress toward fiscal consolidation under a program with the International Monetary Fund (IMF), but in 2024, an energy crisis triggered by prolonged droughts that drastically reduced hydropower generation hurt economic performance. Ecuador is also dealing with severe security and fiscal crises, in addition to volatile oil revenues. In 2024, to address the fiscal crisis, the government introduced temporary taxes, restructured the domestic debt, reduced the gasoline subsidy, and raised the value-added tax from 12% to 15%. These measures led to contractions of 4.0% in the second quarter and 1.5% in the third quarter of 2024 compared with the respective quarters of 2023. The IMF estimates that the cumulative cost of the energy crisis will come to 0.9% of GDP by late 2024 or early 2025. For 2025, the IMF and the Central Bank of Ecuador project moderate economic growth rates of 1.2% and 1.5%, respectively.

1.2 The Canton of Cuenca, which is part of the Amazon basin,[1] has a current population of 610,000 inhabitants, of whom 370,000 live in urban areas and 240,000 in rural areas.[2] The local water and sanitation utility, Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA EP), is tasked with delivering services in urban centers (344,000 inhabitants) and some peri-urban and rural areas (157,000 inhabitants). The remainder of the population is served by the nonprofit *juntas de agua* (water associations) through separate systems (see Figure 1). ETAPA EP is responsible for sewerage service in the parish towns served by the *juntas*, the protection and conservation of the canton's watersheds, and administration of Cajas National Park.

[1] According to the boundaries defined in the regional program Amazonia Forever.

[2] ETAPA EP projection based on 2022 census data.

Figura 1. Área prestacional de agua potable en el cantón CUENCA



1.3 **Water and sanitation services in the canton of Cuenca.** Current coverage levels in the canton of Cuenca are higher than national averages: 93.82% versus 80.99% for water and 73.62% versus 62.78% for sanitation.[3] Nevertheless, ETAPA EP still faces the challenge of expanding coverage and improving[4] water and sanitation services in the canton's rural communities and peri-urban areas, where coverage is 90.03% and 49.57% for water and sanitation, respectively.

1.4 In urban areas, water coverage is 96.81% and sanitation coverage is 89.22%,[5] the latter rate being much higher than in rural areas. The urban water system has several distribution systems, the main ones being Tomebamba[6] and Machángara, which are supplied by the water treatment plants El Cebollar (1,000 liters/second) and Tixán (1,740 liters/second) and serve approximately 85% of urban areas. With respect to sanitation, the utility is currently implementing the Cuenca Integrated Sanitation System with the construction of the Guangarcucho wastewater treatment plant,[7] which needs to be accompanied by a post-dewatering plant for dehydrated sludge and biosolids, control of stormwater

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3 ETAPA EP and *Boletín Estadístico 2022* (statistical bulletin on public water and sanitation utilities).

4 This mainly involves improving the continuity of water service (paragraph 1.9).

5 ETAPA EP.

6 The Tomebamba system is not interconnected with the Machángara system. Given the potential for water shortages due to low water levels or operational interruptions, the Tomebamba system cannot guarantee the continuity of water service. A pipeline to connect the two systems is therefore planned.

7 The project, which is receiving financing from the European Investment Bank (EIB) and the Development Bank of Latin America and the Caribbean (CAF), is in the bidding process (see call for bids). Work is expected to start by the end of 2025.

inflow and groundwater infiltration into the sewers, and the repowering of the Ucubamba wastewater treatment plant.

1.5 **Availability of water resources.** According to ETAPA EP master plan projections, by 2030 the demand for water for human consumption, irrigation, and environmental flows[8] will be an estimated 5,959 liters per second (l/s), while the supply will be an estimated 5,609 l/s, resulting in a projected shortfall of 350 l/s that could increase with the effects of climate change, economic development, and population growth.[9] To address this, ETAPA EP is implementing a "Consolidation of Water Conservation Areas" program under which it is managing 42,620 hectares of protected areas, including Cajas National Park and the Quimsacocha National Recreation Area. The program aims to preserve and protect water sources in recharge areas, to ensure the quality and quantity of water resources needed to supply water to the canton.

1.6 **The main problem to be addressed and its causes.** The main problem ETAPA EP faces is that the water and sanitation services it provides are not sustainable.[10] The main reasons are: (i) vulnerability of the water service to hydroclimatic events, including prolonged droughts and heavy rains, which compromise service reliability and quality; (ii) water infrastructure that has outlived its useful life and limited water risk management infrastructure that would make its water service more resilient and reliable; (iii) limited wastewater treatment capacity and efficiency, which results in pollution risks; and (iv) inefficiencies in service management (see optional link 7).

1.7 **Vulnerability of the water system to hydroclimatic events.** Seventy percent of the water that supplies the El Cebollar, Tixán, and Sustag water treatment plants comes from the Amazon basin. Evapotranspiration from vegetation forms moist air masses that move up the Andean foothills and precipitate in ETAPA EP's water recharge areas. The droughts that have occurred in the Amazon basin have had a direct impact on Cuenca's water security. According to historical data from ETAPA EP weather stations, the number of consecutive dry days has increased in recent years. In 2024, the canton's second longest hydrological drought[11] lasted 160 days, longer than the 118-day drought of 2023, reducing the flow of the Tomebamba River to a historic low of 0.8 m^3 per second. The Tomebamba system is vulnerable to extreme hydroclimatic events exacerbated by climate change, since the river is free-flowing. This affects the availability of the raw water needed to meet water demand.[12]

1.8 Prolonged droughts substantially reduce the flow of water sources, adversely affecting the continuity of water service, which some communities have for just two hours per day. In the rural parishes of El Valle, Santa Ana, and Quingeo, where approximately 13,700 people live, water demand is 23.8 l/s. However, the

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8 Minimum flow required to maintain the river's biodiversity and functionality.

9 The master plan to be financed will update this projection.

10 Sustainability refers to operational sustainability (management efficiency and resilience), environmental sustainability (protecting water recharge areas and reducing risks of polluting water bodies), and social sustainability (meeting water and sanitation needs).

11 The longest, recorded in 1906, lasted approximately one year.

12 In November 2024, the water supply shortfall at the El Cebollar water treatment plant hit 25%, with output falling to 578 l/s from its monthly average of 775 l/s.

three existing water treatment plants barely produce 12.5 l/s under ideal conditions, and as little as 4.3 l/s during the dry season.[13] The lack of water is limiting ETAPA EP's ability to expand water services in rural areas and makes it technically unfeasible to expand sewerage services to boost current and future coverage. In addition, more intense rainfall results in an excess of suspended solids in the water (increased turbidity), forcing water treatment plants in rural areas to temporarily halt operations until water quality improves, as these plants do not have the technology to treat water with high turbidity levels.[14]

1.9 **Water infrastructure that has outlived its useful life.** The main infrastructure (raw water intake and pipelines, El Cebollar water treatment plant, and reservoir) in the Tomebamba system, which serves 40% of the canton of Cuenca, has exceeded its useful life (approximately 70 years of operation) and needs investments for rehabilitation and repowering. According to measurements by ETAPA EP, from 2023 to 2024, the raw water pipelines have had losses of about 30%. In addition, the El Cebollar water treatment plant's current production capacity is 20% below its design capacity.[15]

1.10 **Limited wastewater treatment capacity and efficiency.** Currently, ETAPA EP's sewerage system takes in an average of 2,118 l/s of wastewater, which exceeds the original treatment capacity of the Ucubamba wastewater treatment plant (1,800 l/s), resulting in pollution of the receiving body, the Cuenca River.[16] To address this situation, ETAPA EP is tendering the construction of the new Guangarcucho wastewater treatment plant (paragraph 1.3), which will need to be accompanied by a post-dewatering plant for dehydrated sludge and biosolids. This plant is needed to address two technical restrictions on disposal of dewatered sludge and biosolids at the local landfill:[17] (i) a maximum volume of 50 m^3/day;[18] and (ii) a sludge dryness level above 30%.[19] In addition, ETAPA EP has found high levels of sewer infiltration and inflow, which would jeopardize the proper operation of the Guangarcucho wastewater treatment plant.[20] Additionally, the operation of the Ucubamba sludge treatment system is limited by the availability of water for cleaning filters, resulting in more sedimentation of solids in the ponds and reducing the treatment capacity of the wastewater treatment plant.

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13 Water system for the parishes of El Valle (Maluay), Santa Ana, and Quingeo project, ETAPA EP.

14 According to ETAPA EP, in the Santa Ana watershed, turbidity is 5 nephelometric turbidity units (NTUs) on average, peaking at 150 NTUs. The water treatment plants in this watershed can treat water with levels of up to 100 NTUs.

15 *Diseños Definitivos Mejoramiento de los Procesos de Tratamiento de la PTAP El Cebollar*.

16 An estimated 8 metric tons/day of biochemical oxygen demand come from wastewater discharged into the Cuenca River.

17 The project initially calls for disposing post-dewatered sludge and biosolids in the local sanitary landfill; once the plant is in operation, however, the characteristics of the residual sludge will be analyzed to determine the technical and economic feasibility of using it for agriculture.

18 Currently, the Ucubamba wastewater treatment plant and the water treatment plants generate a total of 60 m^3/day of sludge. It is estimated that once the Guangarcucho wastewater treatment plant starts up, 142 m^3/day will be generated. Having the post-dewatering plant could reduce this volume to less than 50 m^3/day.

19 The sludge that will be produced at the Guangarcucho wastewater treatment plant will have a dryness of just 25%.

20 According to the results of the wastewater characterization, the biochemical oxygen demand values are well below the standard parameters (124 mg/l versus 220 mg/l).

1.11 **Inefficiencies in service management.** ETAPA EP is encountering difficulties in making service delivery more efficient. For instance, nonrevenue water currently amounts to 38% (33% physical losses and 5% commercial losses), the medium-term target (5 years) being to reduce that figure to 32%. Although the utility has a high individual metering rate (98% in 2023) and has been covering its operating costs and debt service with rates,[21] there are challenges when it comes to management activities aimed at goals such as (i) increasing its collection efficiency,[22] (ii) planning its long-term investments through a master plan,[23] and (iii) advancing its organizational and digital transformation (paragraph 1.15**Error! Reference source not found.**). Regarding this last point, because ETAPA EP has grown and expanded its services, it needs to update and optimize its functional organizational structure. Similarly, because the technology in some equipment is obsolete and systems are not well integrated, it needs to automate a number of its commercial management processes in order to more efficiently handle installations, complaints, repairs, and inspections. In addition, since the last fixed asset valuation occurred more than 10 years ago, an update is needed in order to have current information in the books and to re-reconcile accounts and fixed assets (optional link 8).

1.12 **Institutional framework of the sector.** The Ministry of Environment, Water, and Ecological Transition (MAATE) is the lead agency, while the Water Regulation and Control Agency is tasked with regulating water and sanitation services. The municipios, or municipal governments, have jurisdiction over and are responsible for water and sanitation services, mainly via municipal directorates or autonomous municipal public enterprises[24] like ETAPA EP. In rural areas, these services are managed by the *juntas de agua* (optional link 3).

1.13 **Vulnerability and climate change context.** Ecuador is highly vulnerable to natural hazards, including climate-induced hazards, with a high risk of flooding, earthquakes, landslides, extreme heat, forest fires, tsunamis, and volcanic eruptions. Cuenca itself is exposed to forest fires, heat waves, flooding, and water stress.[25] An estimated 20% of the population is exposed to a risk of flooding of 15 centimeters or more. Ecuador is also highly vulnerable to the La Niña and El Niño (El Niño-Southern Oscillation) phenomena, which increase the risk of floods and droughts and impact key economic sectors. In its most recent Nationally Determined Contributions (NDC) report, Ecuador committed to an 11.9% reduction in greenhouse gas emissions from agriculture, waste, energy, and industrial processes by 2025. In 2018, greenhouse gas emissions from the waste sector accounted for 3.4% of the national total. Within this sector, wastewater treatment and discharge (category 4.D) accounts for 34.81% (884.41 gigagrams of CO_2 equivalent).

1.14 **Gender and diversity.** The main gender determinants limiting women's participation, permanence, and advancement in the labor market and the public

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21 Final net result of 5.3% over revenue (2023 ETAPA EP audited financial statements).

22 Annual amount collected / annual amount billed for water and sanitation services: 87% (AquaRating 2023).

23 The last master plan was commissioned in 2003 as part of operation ATN/JF-6682-EC.

24 In urban areas, of the 221 municipios, 62.9% provide services directly, 30.3% do so via municipal public enterprises, 6.3% via joint public companies, and the rest via private operators.

25 Thinkhazard, 2024.

sphere are the roles and stereotypes that relegate them to domestic work and unpaid caregiving, as well as gender violence. In Ecuador, 29.23% of women and 70.77% of men graduate from STEM programs,[26] while in engineering, manufacturing, and construction, the numbers are 20.66% and 79.34%. According to the National Survey on Family Relations and Gender Violence against Women (2019),[27] women in the province of Azuay experience domestic and workplace violence at levels above the national average. While women make up 52.7% of the population of Cuenca,[28] they make up only 24% of ETAPA EP's personnel. Additionally, women do not have access to jobs traditionally associated with men, such as trade jobs (bricklayer, plumber, laborer), driver, inspector, or meter reader; 36% of the women are employed as assistants. Furthermore, only 34.5% of working-age persons with disabilities participate in the labor market, and just 1% of those who do work hold leadership and management positions in companies and businesses.[29] At ETAPA EP, 8.1% of employees are considered persons with disabilities. Women in the company are three times as likely as men to be *sustitutos* (family members of persons with disabilities who serve as proxies for purposes of a company's hiring quota), suggesting that they are largely caregivers. Social stereotypes and prejudice also affect LGBTQ+ individuals and their chances of career development. A research study revealed that, in the workplace, 27.6% of LGBTQ+ individuals surveyed experienced discrimination, 22% suffered exclusion, and another 22% were victims of violence, all of which creates environments of discrimination and rejection[30] (optional link 6).

1.15 **Innovation and digitalization.** ETAPA EP is still in the process of reaching its innovative and digital maturity potential, as evidenced by the opportunities for improvement found with regard to its standard practices, processes, business performance, operation and maintenance support systems, and use of technology in administrative tasks. The company has no structure in place for innovation, lacks activities to promote a culture of innovation, does not take steps to provide creative opportunities, and has little budget for implementing pilot projects for mitigation of innovation risk.[31] Virtually none of the flow and pressure measurement instruments in ETAPA EP's drinking water systems transmit wirelessly (less than 5%), and it does not have an automated inventory system, which makes it difficult to manage operational work, causing delays and hampering process efficiency.

1.16 **Program design strategy.** Program investments have been prioritized based on the ETAPA EP 2024-2027 Strategic Plan, whose main strategic objectives include achieving economic sustainability, managing resources efficiently, optimizing water and sanitation services, and meeting current and future demand with a

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[26] STEM = science, technology, engineering, and mathematics.

[27] *Encuesta Nacional sobre Relaciones Familiares y Violencia de Género contra las Mujeres* (ENVIGMU). Results report: Link.

[28] UN Women and CEPLAES (2019). *Levantamiento de Línea de Base del Proyecto Ciudades y Espacios Públicos Seguros para Mujeres y Niñas en la Ciudad de Cuenca*. Link.

[29] Quoted in Youtopia, *Inclusión Laboral: Solo un 34,5% de las personas con discapacidad tiene empleo.* Link.

[30] National Statistics and Census Institute (INEC), 2013. *Estudio de caso sobre condiciones de vida, inclusión social y cumplimiento de derechos humanos de la población LGBTI en el Ecuador*. *Ecuador en cifras*. Link.

[31] AquaRating: Transformation and Improvement Plan; Focused Analysis - Innovation; and Focused Analysis - Digital Transformation, 2024.

circular, water security approach, considering the impacts associated with climate change. Based on this plan, investments have been prioritized to: (i) expand services in rural areas served by ETAPA EP, to close gaps in water and sanitation coverage; (ii) increase the resilience and reliability of the drinking water system, with priority given to reducing physical losses in urban areas and increasing supply in rural areas, so they can withstand extreme events such as intense droughts[32] (paragraph 1.7); (iii) increase wastewater treatment capacity and efficiency, to enable savings and protect natural capital; and (iv) improve enterprise management, to include designing and implementing digital plans, systems, and tools.

1.17 **Bank experience in the sector.** Over the last 15 years, the IDB Group has been supporting the Government of Ecuador in its efforts to increase the coverage and quality of water and sanitation services and improve the efficiency and sustainability of operators. This support has primarily taken the form of: (i) direct loans to municipal governments or public enterprises for larger projects (4759/OC-EC and 4921/OC-EC); (ii) financing for smaller municipalities through the Development Bank of Ecuador (BDE) (2377/OC-EC, 2839/OC-EC, 3232/OC-EC, 3233/CH-EC, and 5800/OC-EC); and (iii) technical cooperation resources geared mainly toward preinvestment and structuring of loan operations. In Cuenca, the Bank has had two successful operations with ETAPA EP (592/OC-EC and 1753/OC-EC) that have served to: (i) expand water and sanitation coverage in both urban and rural areas of Cuenca; (ii) increase wastewater treatment capacity; and (iii) improve ETAPA EP's operational and commercial management, with nonrevenue water programs, consumption rationalization programs, and rate studies. These operations were supported by several technical cooperation projects (ATN/II-5704-EC, ATN/UE-5743-EC, ATN/SI-6785-EC, ATN/JF-6682-EC, and ATN/OC-16180-EC).

1.18 **Country priorities.** The program is aligned with the objectives of the "Plan for the Creation of Opportunities 2021-2025," which, in its vision for 2030, prioritizes integrated water resource management, ensuring access to and availability of a quality, continuous water supply, as well as proper wastewater treatment. It is also aligned with the "Intersectoral Strategic Plan for the Prevention and Reduction of Chronic Childhood Malnutrition," which includes guaranteed access to safe water for human consumption, sanitation, and hygiene in homes as part of the Basic Care Package.

1.19 **Lessons learned.** The main lessons learned from operations in this sector, both in Ecuador and elsewhere in the region,[33] include: (i) An execution unit needs to be formed and remain operational until the close of the program, with decision-making power (preferably being situated within the lead agency), maintaining staff stability and hierarchy to ensure seamless, efficient execution; (ii) keeping the financial model updated and including resources for rate studies within the program, along with a contractual obligation to submit them, provided the operator with a basis to update the rate schedule and achieve financial sustainability; (iii) having social and environmental management and

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[32] It is estimated that the program's interventions will reduce raw and drinking water losses by about 400 l/s.

[33] Taken from the project completion reports for loans 592/OC-EC, 1753/OC-EC, 1802/OC-EC, and 2839/OC-EC, and the Water and Sanitation Sector Framework Document.

communication plans that promote public participation from the outset will minimize social conflicts; and (iv) having technical cooperation resources during project preparation and startup to support and/or adjust the design of interventions will enable them to be tendered in the first year of execution of the program.

1.20 **Coordination with other multilateral development banks (MDBs).** The Bank is cofinancing several projects with other MDBs in the water and sanitation sector in Ecuador. Operations 4759/OC-EC and 4921/OC-EC are being jointly financed with the Spanish Agency for International Development Cooperation, with parallel cofinancing for operation 4921/OC-EC from the European Investment Bank (EIB). The Bank is working in parallel with the French Development Agency in providing support to Quito's metropolitan water and sanitation utility (EPMAPS), to the Development Bank of Ecuador (BDE) and the municipal government of Manta on water and sanitation projects, and to Empresa Pública Municipal de Aseo de Cuenca on solid waste issues. Together with the Development Bank of Latin America and the Caribbean (CAF), it has recently supported MAATE in developing an initial national water and sanitation plan. Lastly, dialogue has begun with the World Bank to coordinate support to the BDE. Under this operation, ETAPA EP will form a committee for coordination with the EIB and CAF, as they are financing the Guangarcucho wastewater treatment plant (paragraph 1.4).

1.21 **Consistency with the Public Utilities Policy (GN-2716-6).** The program and country's sector objectives are consistent with the principles set out in policy GN-2716-6 and meet the conditions of financial sustainability and economic evaluation, as ETAPA EP's financial position enables it to cover all its costs with operating revenues and honor its financial commitments, and its financial projections indicate that this trend will hold in the future (paragraph 1.431.43). The socioeconomic analysis of the interventions shows that they are socioeconomically viable (paragraph 1.411.41). The sector's institutional framework is sound, with proper separation of roles and responsibilities (optional link 5).

B. Objectives, components, and cost

1.22 **Objectives.** The general objective is to promote the sustainability of water and sanitation service delivery in the canton of Cuenca, with a climate action and natural capital protection approach. The specific objectives are to: (i) enhance the resilience and reliability of the water system in the canton of Cuenca and help conserve water sources; (ii) expand water and sewerage coverage in the canton's rural areas; (iii) improve efficiency and capacity in relation to wastewater treatment and final disposal in the Ucubamba-Guangarcucho system; and (iv) improve the management of services provided by ETAPA EP, incorporating a gender, diversity, and climate change approach.

1.23 **Component 1. Investments in drinking water (US$41.10 million in financing; US$13.86 million in counterpart resources).** This component will finance: (i) repowering of the El Cebollar drinking water system; (ii) construction of the raw water pipeline for the El Cebollar water treatment plant; (iii) interconnection of the Tomebamba and Machángara systems; (iv) construction of the drinking water system for Santa Ana, Quingeo, and upper El Valle; (v) construction of rural drinking water systems; (vi) studies and works for implementation of the nonrevenue water reduction program; (vii) design and implementation of projects for the sustainable management of ETAPA EP system water recharge areas and Cajas National Park; (viii) development of a new water and sanitation master plan

with a 2055 horizon, along with preinvestment studies for the short term; and (ix) works supervision.

1.24 **Component 2. Investments in sanitation (US$24.62 million in financing; US$4.02 million in counterpart resources).** This component will finance: (i) construction of the post-dewatering plant for dehydrated sludge and biosolids; (ii) construction of a water reuse system for the Ucubamba wastewater treatment plant; (iii) studies and works for implementation of the plan to control sewer infiltration and inflow; (iv) construction of rural sewerage systems; and (v) works supervision.

1.25 **Component 3. Management improvement (US$3.28 million in financing; US$1.92 million in counterpart resources).** This component will finance consulting services and procurement of goods for: (i) optimization of key processes; (ii) design and implementation of an optimized functional organizational structure for ETAPA EP; (iii) development and implementation of a comprehensive institutional competency-building system; (iv) implementation of a gender and diversity action plan aimed at advancing the careers of women, LGBTQ+ individuals, and persons with disabilities at ETAPA and strengthening the participation of these groups in the beneficiary communities; (v) cost accounting studies; (vi) asset and inventory management studies; (vii) an integrated portfolio management system; (viii) development of an emergency infrastructure improvement plan; (ix) design of a management model for outsourcing water and sanitation operations; (x) upgrading and integration of the Supervisory Control and Data Acquisition (SCADA) system; (xi) integrated automation for technical/commercial management; (xii) development and implementation of a pilot plan for using renewable energy to generate its own power; (xiii) improvement of the commercial management system; and (xiv) implementation of an innovation plan.

1.26 **Cost escalation (US$1.4 million in counterpart resources).** This will cover potential increases in the cost of interventions.

1.27 **Administration (US$1 million in financing, US$1.8 million in counterpart resources).** This will finance administration and supervision costs, external audits, and program evaluations.

C. Key results indicators

1.28 The program’s outputs and outcomes are captured in the Results Matrix. Table I-1 lists the main outcome indicators.

Table I-1. Main outcome indicators

Outcome indicator	Unit of measure	Baseline*	Target
Households with new access to drinking water service in rural areas of the canton of Cuenca	# households	0	2,459
Households with 24-hour continuous water service in rural areas of the canton of Cuenca	# households	0	1,700
Households with new access to sanitation in rural areas of the canton of Cuenca	# households	0	730
Households served by the El Cebollar system whose water supply continues without rationing during extreme climate events (droughts)	# households	45,806	64,284
ETAPA nonrevenue water	%	38	32
Self-generated renewable energy / energy consumed at the El Cebollar plant	%	0	65
Hectares sustainably managed in water conservation areas and Cajas National Park	# hectares	15,401	18,185

* Baseline taken in 2024.

1.29 **Benefits, potential beneficiaries, and development impacts.** The program is expected to directly benefit about 85,300 people (22,637 households) by providing new (2,459 households) or improved (20,178 households) drinking water connections (18,478 urban and 1,700 rural households) and some 2,750 people (about 730 households) with new network sanitation connections (collection and treatment) in rural areas. The program investments will increase water availability and reduce the service's vulnerability to hydroclimatic events, maintaining the system's ability to provide water and sanitation services. Increasing the water supply will lift rural drinking water coverage to 95.6% and sanitation coverage to 51.8%, in line with the targets in ETAPA EP's Strategic Plan (paragraph 1.16). The program will indirectly benefit the entire canton of Cuenca (610,000 inhabitants) by making the drinking water system more resilient and reliable and improving wastewater treatment efficiency and capacity. In the long term, greater coverage and improved service quality will help to enhance the quality of life of this population. Insufficient water and sanitation coverage and service quality (paragraph 1.8) are indicators of exposure to health risk,[34] which is exacerbated in the relatively poorer parts of the canton's fast-growing rural[35] and peri-urban areas.

[34] Intermittency of service can adversely affect water quality. IDB Technical Note. Intermittent supply. Lessons from a case study in Arraiján, Panama. Nelson, Kara L.; Erickson, John (link).

[35] According to a Central Bank of Ecuador report on poverty, income, and inequality, based on June 2022 figures, and the 2024 National Employment, Unemployment, and Underemployment Survey (ENEMDU), in rural areas the poverty rate is 46.4% and the extreme poverty rate is 22.6%.

This is relevant given the positive link[36] between environmental quality,[37] health,[38] and water and sanitation access. For the households that will gain access to water and sanitation or see the quality of service improve, the specific benefits will be increased water consumption and cost savings from no longer using alternative sources, as well as access to safely managed sanitation. In addition, the program will benefit ETAPA EP by strengthening its management capabilities.

1.30 **Strategic alignment.** The program is aligned with the IDB Country Strategy with Ecuador 2022-2025 (GN-3103-1) in the priority areas of: (i) "Development of the productive sector as a driver of sustainable growth," as it is expected to contribute to the expected outcome "investments that are resilient to climate change and minimize greenhouse gas emissions"; and (ii) "Strengthening of social progress, with emphasis on gender," one of whose expected outcomes is "improved infrastructure for water access."

1.31 The program is consistent with the IDB Group Institutional Strategy: Transforming for Scale and Impact (CA-631), aligning with the objectives of: (i) reducing poverty and inequality, by increasing water and sanitation coverage in rural areas; and (ii) addressing climate change, by increasing the resilience of the drinking water system and reducing its vulnerability to climate change impacts, and by financing infrastructure to improve wastewater treatment. The program is also aligned with the following operational focus areas: (i) biodiversity, natural capital, and climate action (paragraphs 1.13 and 1.36); (ii) gender equality and inclusion of diverse population groups (paragraphs 1.14 and 1.37); (iii) institutional capacity, rule of law, and citizen security (paragraphs 1.11 and 1.25); (iv) productive development and innovation through the private sector (paragraphs 1.15 and 1.38); and (v) sustainable, resilient, and inclusive infrastructure (paragraphs 1.16 and 1.36). The operation is part of the 2025 Operational Program with Ecuador (EC-O0015).

1.32 The program is also consistent with the IDB Group's Amazonia Forever program and is aligned with the pillars of (i) people; (ii) sustainable infrastructure, cities, and connectivity; and (iii) sustainable low-carbon agriculture, livestock, and forestry in that it will increase water and sanitation coverage in rural areas, increase the resilience of the drinking water system and reduce its vulnerability to climate change impacts, and support the consolidation of water conservation areas.

1.33 Additionally, the operation is consistent with the Climate Change Action Plan (GN-2835-13) as regards increasing climate resilience and decarbonization and is aligned with the Water and Sanitation Sector Framework Document (GN-2781-13) under the lines of action "Promote universal access to quality water and sanitation

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[36] This relationship is documented in numerous studies, such as those summarized by Brenneman et al. in Infrastructure and Poverty Linkages, A Literature Review. World Bank, 2002. Other studies include: Annette Prüss-Ustün et al., Burden of disease from inadequate water, sanitation and hygiene in low- and middle-income settings: a retrospective analysis of data from 145 countries. Tropical Medicine and International Health, 2014; Kremer et al., What Works in Fighting Diarrheal Diseases in Developing Countries? A Critical Review, CID Working Paper No. 140, 2007.

[37] Rodríguez-Jeangros et al., 2018 model the effect of wastewater treatment on the quality of the Bogotá River (link).

[38] The probability of contracting waterborne diseases decreases when water and sanitation services are in place, and this has a direct effect on the reduction of infant mortality. Studies by Wagstaff and Claeson (2004) (link), Schady (2015) (link), and Conte Grand, M. and Coloma, G. (2009) found a significant relationship between increases in water and sanitation coverage and decreases in mortality (link).

services with equity, inclusion, and affordability" and "The design of policies and programs incorporates disaster and climate change risk management and promotes water security."

1.34 **Paris alignment.** This operation has been reviewed using the Joint MDB Assessment Framework for Paris Alignment and the IDB Group Paris Alignment Implementation Approach (GN-3142-1) and has been deemed to be: (i) aligned with the adaptation objective of the Paris Agreement; and (ii) universally aligned with the mitigation objective of the Paris Agreement.

1.35 **Climate finance.** The 82.71% of program resources being invested in adaptation and mitigation activities are considered climate finance, according to the joint MDB methodology. Additionally, according to the IDB Group's green finance tracking methodology (GN-3101), the operation contributes to the environmental sustainability objectives of sustainable use and protection of water and marine resources, the transition to a circular economy, strengthening environmental governance systems, and resilience and disaster risk management. In total, climate and green financing amounts to 94.35%.

1.36 **Climate change actions.** In terms of mitigation, the operation contributes to reducing greenhouse gases via: (i) the lowering/elimination of emissions by implementing the post-dewatering system and the drinking water system for the Santa Ana watershed, connecting the Tixán and El Cebollar water treatment plants, piping raw water to the El Cebollar water treatment plant, reducing nonrevenue water, and decreasing the use of septic tanks through rural sanitation interventions; and (ii) ETAPA EP's pilot plan for using renewable energy to generate its own power.[39] In terms of climate change adaptation, the operation includes actions identified as priorities in Ecuador's NDC (2019) in the water resources sector, as works under Component 1 dovetail with these priority lines of action: (i) install sustainable basic water and sanitation services, irrigation, and drainage to reduce vulnerability to flooding of water infrastructure and contamination of aquifers caused by the inflow of solid and liquid waste in areas of high climate risk; (ii) provide technical assistance and capacity-building to local stakeholders for the sustainable use of water in areas with current and/or future water stress, taking into account climate projections and climate risk assessments; and (iii) implement hydraulic, pipeline, distribution, and water application infrastructure in areas currently experiencing water stress or projected to, based on future climate scenarios. The operation is aligned with the NDC in the priority area of land use, land-use change, and forestry, where it includes a line of action—sustainable management of watersheds and microwatersheds—that is relevant to this program because of the lines of action involving water conservation areas.

1.37 **Gender and diversity actions.** The strategy to address the identified labor, income, and participation gaps and violence (paragraph 1.14) will be implemented at two levels: (i) in the beneficiary communities, a plan will be implemented to boost the participation of women, LGBTQ+ individuals, and persons with disabilities in the public sphere in order to promote their economic and decision-making autonomy, and will include: (a) training in nontraditional trades (plumbing, bricklaying, etc.); (b) entrepreneurship and management of small and medium-sized enterprises; (c) self-esteem, leadership, and awareness regarding the inclusion of persons

[39] Two technologies will be analyzed: microturbines in water mains and photovoltaics.

with disabilities and LGBTQ+ individuals, universal accessibility, and the importance of diversity in companies and institutions; and (d) gender-based violence prevention and care, taking into account the human rights of women and LGBTQ+ individuals, and promotion of legal mechanisms to address gender-based violence; and (ii) at the company, an institutional gender, disability, and LGBTQ+ action plan will be implemented, which will include mentoring programs to boost the careers of these groups at ETAPA EP. The plan's scope and the details pertaining to the design of actions will be based on the results of the diagnostic assessment performed under ATN/OC-21315-EC.

1.38 **Innovation and digitalization actions.** The program will assist ETAPA EP in adopting a systematic innovation management model based on good practices (IDB-TN-2513), to include: (i) designing a business innovation management structure; (ii) promoting behavior conducive to a culture of innovation (IDB-TN-2445), access to external resources through linkages with ecosystem entities (IDB-TN-2565), and opportunity creation based on innovation ideas, initiatives, and projects (IDB-TN-02757); and (iii) setting goals and allocating resources consistent with ETAPA EP's Strategic Plan. Digital transformation will be supported by financing a comprehensive portfolio management system, SCADA updates, technical/commercial management automation, and commercial management system upgrades.

1.39 **Public-private synergies.** In connection with some of the activities to be financed by the program (ETAPA EP water and sanitation master plan (paragraph 1.23) and pilot plan for using renewable energy to generate its own power (paragraph 1.25)), future opportunities for non-sovereign guaranteed financing to ETAPA EP for priority investments that require medium-term amortization periods (5-10 years), e.g., investments related to energy efficiency, renewable energy generation, and nonrevenue water, will be coordinated with IDB Invest. Also, based on the strategy to advance an innovation plan (paragraph 1.38) at ETAPA EP, the support of the IDB Lab will be sought in piloting new technologies that could contribute to improving management and, if successful, could later be scaled up with program resources.

1.40 **Technical feasibility.** The technical evaluation found that the projects adequately address the needs identified by ETAPA EP; they are based on a medium- and long-term vision, follow widely accepted engineering principles, and meet Ecuador's technical standards and design criteria, and the solutions arose from an analysis of alternatives (optional link 2). To address the Bank's technical recommendations and move ahead with preparing the bidding documents, resources from ATN/OC-21315-EC will be used for supporting studies for nonrevenue water projects, the post-dewatering plant,[40] and the master plan;[41] as well as for actions needed to ensure that permits are obtained and requirements are met for the execution of works.

[40] The project's stageability (construction in phases) will be analyzed, in case there are any delays or the Guangarcucho wastewater treatment plant produces less sludge than anticipated.

[41] The master plan will include a strategy to close gaps in water and sanitation service access and quality in rural areas of the canton of Cuenca.

1.41 **Economic feasibility.** A cost-benefit analysis was carried out for the projects to be financed, and the cost-effectiveness[42] of sanitation projects in rural areas was evaluated. These evaluations were based on a comparison of costs and benefits in with- and without-intervention scenarios and costs per inhabitant of similar projects, respectively. The economic benefits of pollution-reduction projects in urban areas were quantified using willingness-to-pay figures and the contingent valuation methodology. Drinking water project benefits were quantified using the Public Works Simulator. The benefits of treating sludge from the Ucubamba wastewater treatment plant and the El Cebollar, Tixán, and Sustag water treatment plants were quantified as the increase in agricultural productivity from using treated sludge. The costs considered for the evaluation were incremental investment and operation and maintenance costs, valued at social prices. The results show that the operation is socioeconomically viable, with economic internal rates of return (EIRR) for the individual projects ranging from 15.28% to 47.64% and an overall EIRR of 13.28% for the program as a whole. The equivalent annual cost per inhabitant of the rural sanitation projects (US$368/inhabitant) is lower than the average (US$632/household) for other similar programs implemented in Ecuador. The analysis was accompanied by the respective sensitivity analysis (optional link 2).

1.42 **Ability to pay and affordability.** An analysis that considered income quintile, current rates charged by ETAPA EP, and average monthly billed consumption[43] verified that the average monthly water and sanitation service bill paid by users is equal to or less than 5% of family income. It showed that for the bottom quintile (quintile 1), the average monthly bill as a percentage of average declared monthly income is 3.1% in rural areas[44] and 2.09% in urban areas. ETAPA EP's rate schedule includes discounts[45] for vulnerable groups.

1.43 **Financial viability.** A financial analysis of ETAPA EP showed that it will be able to finance the local contribution during the program implementation period, cover its debt service, and adequately operate and maintain the program works. The financial analysis included a historical analysis based on the utility's audited financial statements and operational information, as well as financial modeling to project its financial position for the coming fiscal years. The historical financial data indicate that ETAPA EP's rate revenue has adequately covered all its operating costs (reflected in an EBITDA margin of 31% and average annual net margin of 5% for the last three full fiscal years, calculated over operating revenue) as well as its financing costs. ETAPA EP has been meeting its financial commitments and

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[42] The cost-effectiveness analysis is a methodology used to evaluate the cost efficiency of a project, especially in public infrastructure when the economic value of the benefits cannot be quantified or when the beneficiary population is socioeconomically vulnerable or in a low-income group and the quantification of the benefits to these populations produces low values that do not reflect the total economic value of the benefits for society. Although it does not measure direct returns, it allows the most economical option to be identified in terms of annual costs per beneficiary.

[43] In rural areas, average consumption is 13 m^3/household/month.

[44] For rural areas, ETAPA EP's rate schedule has differentiated rates that range from US$0 for the first 25 m^3 to US$0.7 for consumption above 51 m^3 and vary from municipality to municipality. The affordability metric can therefore not be interpreted as absolute since it depends on location and average household consumption.

[45] Link. ETAPA EP guarantees service accessibility to vulnerable groups based on the principles of solidarity, equity, and transparency.

adhering to borrowing limits, periodically revises rates, and has been able to fund a significant part of its investment plan through internal cash generation. The financial projections indicate that ETAPA EP will be able to maintain a sound financial position for the projection period, including an average EBITDA margin of about 37% for the next 10 years and positive net earnings, maintaining borrowing levels within acceptable limits (optional link 3). ETAPA EP has pledged to cover operating costs, depreciation, and financial costs with its operating revenues; in the event that the Bank determines that it is not in compliance with the above, ETAPA EP will take measures acceptable to the Bank to ensure its financial viability. ETAPA EP will deliver an updated corporate financial model to the Bank annually, within 90 days after the close of each fiscal year.

1.44 **Institutional viability.** During program preparation, the Institutional Capacity Assessment Platform was used to assess ETAPA EP as executing agency. The findings indicate that its level of development is sufficient for program implementation, consistent with its experience in implementing Bank-financed operations (paragraph 1.17). ETAPA EP also has experience executing programs financed by other MDBs[46] and the national development bank.[47] Given the projected capabilities needed for this program, staff will be added to ETAPA EP's structure to assume specific coordination and fiduciary, social, environmental, and technical management responsibilities (paragraph 3.4). In recent years ETAPA EP has been strengthening its corporate governance and transparency processes and adopting good management practices (optional link 8).

II. Financing Structure and Main Risks

A. Financing instruments

2.1 **Financing modality and structure.** The program has been structured as a specific investment loan operation, since its scope is limited, its components are logically interdependent but physically and technically separate, and its preliminary design and cost have been defined. The total cost is US$93 million, of which US$70 million will be financed through a loan from the Bank's Ordinary Capital and US$23 million will be covered by the local contribution. The disbursement period will be 5 years, consistent with the multiyear execution plan (optional link 1), which factors in challenges encountered by ETAPA EP in implementing previous operations.

[46] EIB and CAF.

[47] Development Bank of Ecuador (BDE).

2.2 **Cost.** Table 2.1 provides a breakdown of program costs.

Table 2.1. Estimated program costs (US$ million)

Components	IDB	Local	Total	%
1. Investments in drinking water	41.10	13.86	54.96	59.1%
2. Investments in sanitation	24.62	4.02	28.64	30.8%
3. Management improvement	3.28	1.92	5.20	5.6%
Cost escalation	-	1.40	1.40	1.5%
Administration	1.00	1.80	2.80	3.0%
Total	**70.00**	**23.00**	**93.00**	**100%**

2.3 **Disbursement schedule.** Table 2.2 sets out the loan disbursement schedule.

Table 2.2. Disbursement schedule (US$ thousands)

Financing source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB	5,007	18,650	27,843	13,443	5,056	70,000
Local	507	5,940	8,401	5,636	2,517	23,000
Total	5,514	24,590	36,244	19,079	7,573	93,000
(%)	5.93	26.44	38.97	20.52	8.14	100.00

B. Environmental and social risks

2.4 **Environmental and social considerations.** Based on the environmental and social impact classification, the program is a category “B” operation. The activities to be carried out under the program will generate moderate, localized, short-term negative environmental and social impacts, for which effective mitigation measures are readily available. Temporary impacts on water quality and soil structure and quality, displacement of fauna, removal of vegetation cover, and generation of particulate matter, noise, and odors have been preliminarily identified. The need for land acquisition and the establishment of right-of-way easements has also been identified.

2.5 **Environmental and social risks.** The level of environmental and social risk has been classified as substantial, owing to the risk of occupational accidents and risks to the community, the risk of soil and water contamination in the management and treatment of sludge, and potential community grievances due to temporary road closures, generation of odors, and proliferation of vectors. Although ETAPA EP has experience with projects financed by the IDB and other international organizations, the executing agency will be strengthened so that it can implement the new Environmental and Social Performance Standards (ESPS) under the Environmental and Social Policy Framework (ESPF).

2.6 **Disaster and climate change risk classification.** The program has been classified as having moderate disaster and climate change risk. The program is located in areas exposed to natural hazards, mainly moderate risks of earthquakes, droughts, and floods, which are expected to increase in frequency and intensity as the effects of climate change intensify. The interaction of program

infrastructure with the natural and anthropic environment is deemed to entail low risk, but the risk level assigned based on the criticality of a loss of essential infrastructure services and on physical characteristics is moderate.

2.7 Considering that the program involves specific works, and with a view to meeting the requirements set out in the ESPF and the 10 ESPSs, due diligence included the following: (i) a gap analysis and development of a program Environmental and Social Management System (ESMS); (ii) an environmental and social analysis of program works; (iii) an Environmental and Social Management Plan (ESMP), aligned with the requirements of the ESPF and the 10 ESPSs; and (iv) a stakeholder engagement plan (required link 3). In keeping with section 3.24 of the ESMF, the following social and environmental documentation was disclosed, in draft form, on the websites of the IDB and the executing agency on 10 January 2025, prior to the analysis mission: the environmental and social analysis, the ESMP, and the stakeholder engagement plan. Lastly, pursuant to ESPS 10, a consultation process was held on 13 and 14 February 2025 to present the project to those affected and interested groups. Participants included local municipal government authorities, community leaders, and presidents of different neighborhoods. The consultations highlighted the importance of continuing to engage the community during project implementation in the parishes involved. A consultation was also held on 8 November 2024 on the "Drinking Water System for Santa Ana, Quingeo, and Upper El Valle" project, where concerns focused on rates paid by vulnerable groups, mainly in the Quingeo area. It should be noted that ETAPA EP's rate system includes differentiated charges and discounts for vulnerable groups. The public consultation report, along with the updated versions of the social and environmental documents, were posted to the Bank's website and ETAPA EP's website on 12 March 2025.

C. Fiduciary risks

2.8 The following medium-high risks were identified: (i) if ETAPA EP staff are not familiar with the IDB's new fiduciary policies,[48] delays could occur in the bidding and execution processes; and (ii) without well-defined processes for institutional coordination between ETAPA EP's various departments, efficient planning and execution will be impossible, leading to problems during startup, execution, and payment of programmed activities, in addition to delays in submitting information to meet contractual conditions and submitting vouchers and disbursement requests, resulting in deviations in programming. These risks will be mitigated by: (a) strengthening and training on IDB fiduciary policies, including integrity risk management, to the program execution unit and to other ETAPA EP departments, and hiring of experts to support fiduciary management and provide technical support for critical procurement processes; (b) a full-time program execution unit that will report directly to the General Manager of ETAPA EP and will have personnel assigned to coordinate program activities with the company's other line departments; (c) incorporation into the Program Operations Regulations of the internal mechanisms for coordination between the program execution unit and ETAPA EP's other departments; and (d) monitoring and supervision processes with the Bank to generate improvements in the monitoring mechanisms to

[48] In the programs ETAPA EP executed in the past, it applied the Bank's previous fiduciary policies.

minimize potential deviations in the contracting, including holding weekly virtual meetings and joint technical and fiduciary supervision visits.

D. Other key issues and risks

2.9 Other medium-high risks have been identified: (i) changes in Ministry of Economy and Finance authorities due to the 2025 elections could delay the Debt Committee approval[49] required for the loan and guarantee contracts to be signed; (ii) community opposition to construction of the post-dewatering plant could delay the start of that works project; (iii) delays in installing in-home connections could delay the delivery of water and sanitation services; (iv) delays in obtaining right-of-way easements and acquiring the needed land could stall startup of the works; and (v) delays in securing environmental permits and technical feasibility certificates from MAATE could delay the start of works. The following management measures have been proposed, respectively, to address these risks: (i) coordinate meetings with new authorities together with the Bank to socialize the program and provide status updates; (ii) develop and implement a comprehensive communications plan; (iii) design a system and plan for installing connections; (iv) seek a municipal ordinance to facilitate the easement process and periodically follow up on steps involved in acquiring land; and (v) coordinate meetings with MAATE authorities for process follow-up.

III. Implementation and Management Plan

A. Summary of implementation arrangements

3.1 **Borrower and executing agency.** The borrower and executing agency will be ETAPA EP, which has been a borrower and has experience implementing water and sanitation programs financed by the Bank (paragraph 1.17) and by other multilateral agencies (paragraph 1.20). ETAPA EP is eligible to borrow from the Bank (OP-301), as it possesses juridical personality under public law and its own assets,[50] is empowered to contract external loans, may submit to arbitration and use the Bank's procurement and consultant selection policies, and has the financial capacity to assume debt (paragraph 1.43).

3.2 **Guarantors.** The Republic of Ecuador will be the guarantor of the financial obligations (payment of debt, fees, and other financing charges), and the Municipal Decentralized Autonomous Government (GADM) of the Canton of Cuenca will guarantee the other contractual obligations for whose fulfillment it is responsible, except for the local contribution obligation (paragraph 3.3), as explained below. Coordination with the GADM will be done through ETAPA EP's board of directors (see optional link 8).

3.3 **Exceptions to Bank policies.** A partial exception to the policy on guarantees (GP-104-2/OP-303) is requested, such that the Municipal Decentralized Autonomous Government (GADM) of the Canton of Cuenca would guarantee only

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[49] This committee regulates the procedures for borrowing by entities not included in the General State Budget and authorizes the contracting of public debt at all levels of government; its authorization is needed for those responsible for the debt to sign the loan and guarantee contracts.

[50] Created in 1968 by an ordinance of the Cantonal Council of Cuenca and modified by ordinance in January 2010. Its purpose includes the delivery of public water, sewerage, environmental sanitation, and supporting services.

the borrower's performance obligations and not the program's local counterpart contribution. This exception is justified because ETAPA EP's financial position is sound, as evidenced by its audited financial statements from recent fiscal years, and its projected financial condition is robust (paragraph 1.43). In the two loan operations with the Bank previously executed by ETAPA EP (paragraph 1.17), the local counterpart contributions were well above the originally planned levels. This partial waiver of the policy on guarantees is not believed to pose a risk to satisfactory program execution or to the achievement of its objectives and targets.

3.4 **Execution mechanism.** ETAPA EP will create a program execution unit devoted exclusively to administering the program and meeting its objectives. This program execution unit will report to the company's General Manager and will receive support from the line offices with regard to the program's technical and fiduciary requirements. The program execution unit will consist of the following technical staff, at minimum: (i) manager of the program execution unit; (ii) infrastructure project lead; (iii) institutional project lead; (iv) procurement lead; (v) administrative / financial lead; (vi) social/environmental lead; and (vii) monitoring and control lead. Program execution will be governed by the provisions of the Program Operations Regulations, which will include the profiles of each member of the program execution unit's technical team, to be appointed or hired with the Bank's prior no objection. Additionally, technical and fiduciary experts will be hired to support program implementation (optional link 9).

3.5 **Special contractual conditions precedent to the first disbursement of the loan: (i) a program execution unit will be set up within ETAPA EP, reporting to the General Manager, with the following technical team appointed or hired to work exclusively on the program: manager of the program execution unit, infrastructure project lead, institutional project lead, procurement lead, administrative/financial lead, social/environmental lead, and monitoring and control lead; and (ii) the Program Operations Regulations will be approved and in force, under the terms previously agreed upon with the Bank, will reflect the environmental and social requirements, and will incorporate as annexes the Environmental and Social Management System, the Environmental and Social Management Plan, and the Environmental and Social Action Plan.** These conditions—having a properly staffed execution unit and Program Operations Regulations that spell out detailed operational and coordination guidelines—are considered vital for ensuring the start of program execution.

3.6 **Procurement.** Procurement will follow the policies for the procurement of IDB-financed goods and works (GN-2349-15) and for the selection and contracting of IDB-financed consultants (GN-2350-15). All procurement items will be included in the procurement plan. The executing agency has agreed with the Bank on an initial procurement plan (required link 4). No advance procurement is anticipated.

3.7 **Disbursements and audits.** Disbursements and audits will be governed by the Financial Management Guidelines for IDB-financed Projects (OP-273-12 or updates thereto). The Bank may issue a new advance when accounts are rendered for at least 80% of the cumulative balance pending substantiation. Retroactive financing is not anticipated. The external program audit will be performed by an independent firm eligible to audit Bank-financed operations, which will be selected and contracted according to procedures agreed with the IDB. During implementation, the executing agency will submit to the Bank the audited

program financial statements within 120 days following the close of each fiscal year and a final statement within 120 days following the expiration of the original disbursement period or extensions thereof. The company's audited financial statements will also be submitted to the Bank within 180 days following the close of each fiscal year. Both audits may be financed with program resources.

3.8 **Operation and maintenance.** ETAPA EP agrees to: (i) take the necessary measures to ensure that the financed works and equipment are maintained in accordance with generally accepted technical standards; and (ii) submit a report on the status of the works and equipment and the annual maintenance plan to the Bank during the first quarter of each year, beginning the year in which the first works project is completed, for up to three years after the expiration of the original disbursement period or extensions thereof. If the inspections carried out by the Bank, or the reports it receives, reveal that maintenance falls short of the agreed upon levels, ETAPA EP will take the necessary steps to correct the deficiencies.

B. Summary of arrangements for monitoring results

3.9 **Monitoring.** The agreed program monitoring and evaluation plan calls for the use of a procurement plan, multiyear execution plan, annual work plan, financial plan, results matrix, and progress monitoring report. The program execution unit will submit revised multiyear execution plans and annual work plans to the Bank every year, as well as a progress report within 60 days following the end of each six-month period, to include the results achieved and an action plan for the next six-month period (required link 2).

3.10 **Evaluation.** A midterm and a final evaluation will be performed following project completion report guidelines. The midterm evaluation will be performed when 50% of the loan proceeds have been disbursed or 30 months after the effective program start date, whichever is first. The final evaluation report will be submitted 90 days after the date of the last program disbursement. The methodology for program evaluation and preparing project completion reports is described in required link 2.

Development Effectiveness Matrix		
Summary	EC-L1297	
I. Corporate and Country Priorities		
Section 1. IDB Group Institutional Strategy Alignment		
Operational Focus Areas	-Biodiversity, natural capital, and climate action -Gender equality and inclusion of diverse population groups -Institutional capacity, rule of law, citizen security -Sustainable, resilient, and inclusive infrastructure -Productive development and innovation through the private sector	
[Space-Holder: Impact framework indicators]		
2. Country Development Objectives		
Country Strategy Results Matrix	GN-3103-1	"Desarrollo del sector productivo como motor del crecimiento sostenible" y "Fortalecimiento del progreso social con énfasis en género"
Country Program Results Matrix	0	The intervention is included in the 2024 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution		9.5
3.1 Program Diagnosis		2.5
3.2 Proposed Interventions or Solutions		3.5
3.3 Results Matrix Quality		3.5
4. Ex ante Economic Analysis		10.0
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		1.5
4.2 Identified and Quantified Benefits and Costs		3.0
4.3 Reasonable Assumptions		2.5
4.4 Sensitivity Analysis		2.0
4.5 Consistency with results matrix		1.0
5. Monitoring and Evaluation		8.4
5.1 Monitoring Mechanisms		2.8
5.2 Evaluation Plan		5.5
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood		Medium Low
Environmental & social risk classification		B
IV. IDB´s Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Budget, Treasury, Accounting and Reporting. Procurement: Information System.
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	ATN/OC-21315-EC

Evaluability Assessment Note:
The general objective of this operation is to promote the sustainability of the provision of water and sanitation services in Cantón Cuenca, under a climate action and natural capital protection focus. The specific objectives are: (1) improving the resilience and reliability of the drinking water system in Cantón Cuenca and contributing to the conservation of water sources, (2) increasing water and sewage coverage in the rural areas of Cantón Cuenca, (3) improving the eficiency and capacity of wastewater treatment and final disposal in the Ucubamba-Guangarcucho system, and (4) improving ETAPA EP's service management, incorporating a gender, diversity, and climate change focus.

The diagnosis finds that the current water and sanitation system in Cantón Cuenca will be unable to meet the city's future needs in the face of a growing population and climate change. The determinants of the problem include an insufficient coverage of water and sanitation in rural areas, obsolete infrastructure, increased frequency and severity of extreme weather events, and shortfalls in ETAPA's management and operational practices. The project has a sound vertical logic, and the majority of the indicators proposed in the results matrix are SMART.

The economic analysis finds that the project as a whole has an ERR of 13.28% and a NPV of US$10.1 million using a discount rate of 12%. The analysis consists of separate cost-benefit analyses for each of the proposed interventions. These analyses show that almost all interventions produce positive benefits except for a relatively small rural sanitation intervention, which is shown to be cost efficient in relation to similar projects in Ecuador. The economic analysis is thorough and presents the methodology used and most of the necessary assumptions in detail.

Project monitoring relies on reports from the executing agency, whereas evaluation will be conducted using a before and after methodology. These methodologies are appropriate to answer the evaluation questions and have a defined budget.

The proposal identifies fourteen risks (seven classified as medium-high and none as high), as well as strategies to mitigate these risks.

RESULTS MATRIX

Project objectives:	The specific objectives for this operation are to: (i) enhance the resilience and reliability of the water system in the canton of Cuenca and help conserve water sources; (ii) expand water and sewerage coverage in the canton's rural areas; (iii) improve efficiency and capacity in relation to wastewater treatment and final disposal in the Ucubamba-Guangarcucho system; and (iv) improve the management of services provided by ETAPA EP, incorporating a gender, diversity, and climate change approach. Accomplishing these objectives will contribute to the general objective of promoting the sustainability of water and sanitation service delivery in the canton of Cuenca, with a climate action and natural capital protection approach.

GENERAL DEVELOPMENT OBJECTIVE

Indicators	Unit of measure	Baseline value	Baseline year	Target year	Target	Means of verification	Comments[1]
General development objective: To promote the sustainability of water and sanitation service delivery in the canton of Cuenca, with a climate action and natural capital protection approach							
I.1 Greenhouse gas emissions avoided	Metric tons CO_2 equivalent	0	2024	2030	8,499.91	Annual operational reports on emissions prepared by ETAPA EP	Indicators will be observed at the end of the program. For more details, see required link 2.
I.2 Biochemical oxygen demand from wastewater discharged into the Cuenca River	kg/day	8,074	2024		5,101	Operational report on the Ucubamba and Guangarcucho WWTPs	

[1] For more details, see the program's monitoring and evaluation plan (required link 2).

OUTCOMES

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
Specific development objective 1: To enhance the resilience and reliability of the water system in the canton of Cuenca and help conserve water sources											
R.1.1 Loss of raw water from pipelines between the preliminary settling tanks and the El Cebollar plant	%	30	2024				5		5	Reports on flow measured at the preliminary settling tanks and at the El Cebollar intake	
R.1.2 ETAPA EP nonrevenue water	%	38	2024	38	38	36	34	32	32	Drinking Water Department annual report	
R.1.3 Households served by the El Cebollar system whose water supply continues without rationing during extreme climate events (droughts)	households	45,806	2024					64,284	64,284		The target equals 100% of households served by the plant.
R.1.4 Hectares sustainably managed in water conservation areas and Cajas National Park	hectares	15,401	2024			1,000		1,784	18,185	Environmental Unit reports	Sustainably managed areas are defined as water conservation areas preserved and protected by ETAPA EP to ensure a sufficient water supply. The criteria ETAPA EP may use to prioritize areas include (but are not limited to): (i) proximity to protected areas, (ii) vegetation cover, (iii) connectivity, and (iv) fragmentation of land area.
Specific development objective 2: To expand water and sewerage coverage in the canton's rural areas											
R.2.1 Households with new access to safely managed water services in rural areas of the canton of Cuenca	households	0	2024		257	500	1,702		2,459	ETAPA Commercial Department report	
R.2.2 Households with 24-hour continuous water service in rural areas of the canton of Cuenca	households	0	2024			513	1,194		1,700	ETAPA Commercial Department report	

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
R.2.3 Households with new access to sanitation in rural areas of the canton of Cuenca	households	0	2024		292	438			730	ETAPA Commercial Department report	
Specific development objective 3: To improve efficiency and capacity in relation to wastewater treatment and final disposal in the Ucubamba-Guangarcucho system											
R.3.1 Volume of dehydrated sludge and biosolids from water and wastewater treatment plants processed by post-dewatering plant	m^3/day	0	2024					50	50	Post-dewatering plant operational report	
R.3.2 Percent dryness of the dehydrated sludge and biosolids from the water and wastewater treatment plants	% dryness	30%	2024					70%	70%		
Specific development objective 4: To improve the management of services provided by ETAPA EP, incorporating a gender, diversity, and climate change approach											
R.4.1 Collection rate for water and sanitation services	%	87%	2023					90%	90%	Audited financial statements	
R.4.2 Annual audited ETAPA EP financial statements with no qualifications regarding fixed assets (100% to 0%)	#	0	2023			1	1	1	1	External audit report	Reducing the number of qualified opinions on audited financial statements promotes accountability and the reliability of the utility's financial information.
R.4.3 Employees per 1,000 water and sanitation connections	Employees / 1,000 connections	4.32	2024					3.95	3.95	ETAPA Commercial Department and Human Resources Department reports	
R.4.4 Renewable energy generated / energy consumed by the El Cebollar plant	%	0	2024				30%	65%	65%	El Cebollar operational report	

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
R.4.5 Women, LGBTQ+ individuals, and persons with disabilities who successfully complete the mentorship program designed as part of the Gender and Diversity Action Plan	persons	0	2024			10	10	10	30	Mentorship completion reports	

OUTPUTS

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
Component 1: Investments in drinking water											
Drinking water system for several communities in the parishes of El Valle, Santa Ana, and Quingeo built and operating	system	0	2024					1	1	Inspection reports	
Raw water pipeline to the El Cebollar drinking water treatment plant built	km				1.36	2.04	2.40	1.00	6.8		
El Cebollar Plant drinking water treatment plant rehabilitated	plant						1		1		
Treated water pipeline connecting the Tixán and El Cebollar drinking water treatment plants built	km				1.22	1.83			3.05		
Strategic nonrevenue water plan implemented	project							1	1		
Rural drinking water systems built	system				3				3		
Projects for sustainable management of water conservation areas and Cajas National Park designed and implemented	project					1			1	Consultant reports	
Cuenca Water and Sanitation Master Plan Phase III developed	plan						1		1		
Component 2: Investments in sanitation											
Post-dewatering plant for dehydrated sludge from ETAPA EP water treatment and purification plants built	plant	0	2024				1		1	Inspection reports	
Program to reduce infiltration and inflow into the ETAPA EP sanitation system implemented	program						1		1		
System for reusing water from the Ucubamba wastewater treatment plant built	system							1	1		

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
Rural sewerage systems expanded	system				2	5			7		
Component 3: Management improvement											
Proposals for improving key processes at ETAPA EP developed	proposal	0	2024	1	2				3	Consultant reports	
Proposal for restructuring ETAPA EP developed	proposal						1		1		
Comprehensive Institutional Competency-building System designed and implemented	system					1			1		
Plan to boost the participation of women, LGBTQ+ individuals, and persons with disabilities in the public sphere developed and implemented	plan				1				1		
Institutional Gender and Diversity Action Plan for ETAPA EP developed and implemented	plan				1				1		
Cost accounting study performed	study				1				1		
Asset and inventory management study performed	study					1			1		
Integrated Portfolio Management Model designed	model					1			1		
Emergency infrastructure improvement plan developed	plan					1			1		
Management model for outsourcing water and sanitation operations designed	model					1			1		
SCADA system updated and integrated	system					1			1		
Automated system for technical/commercial management designed and implemented	system							1	1		

Indicators	Unit of measure	Baseline value	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	End of project	Means of verification	Comments
Automated system for commercial management designed and implemented	system					1			1		
Pilot plan for using renewable energy to generate power for ETAPA EP's own use designed and implemented	plan					1			1		
Innovation plan designed	plan				1				1		

Country: Ecuador **Division:** WSA **Operation No.:** EC-L1297 **Year:** 2025

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Executing agency: Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA EP)

Operation name: Water and Sanitation Program for the Canton of Cuenca

I. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

1. **Use of country systems in the operation**

☒ Budget	☒ Reports	☒ Information systems	☐ National competitive bidding (NCB)
☒ Treasury	☐ Internal audit	☐ Shopping	☐ Other
☒ Accounting	☐ External control	☐ Individual consultants	☐ Other

2. **Fiduciary execution mechanism**

Specific features of fiduciary execution	ETAPA EP will set up a program execution unit devoted exclusively to the program that will report to the General Manager and receive support from the line offices with regard to the program's technical and fiduciary requirements. The program execution unit will be staffed with fiduciary personnel specifically responsible for the operation.

3. **Fiduciary capacity**

Fiduciary capacity of the executing agency	The institutional capacity assessment of ETAPA EP revealed strengths, weakness, and opportunities for improvement. ETAPA EP was found to have a sufficient level of development for program implementation, given its experience executing programs financed by the Bank and other multilateral and national development agencies. ETAPA EP will be strengthened by staffing the program execution unit to assume specific coordination and fiduciary and technical management responsibilities.

4. **Fiduciary risks and risk response**

Risk taxonomy	Risk	Risk level	Risk response
Organizational structure	If ETAPA EP staff are not familiar with the IDB's new fiduciary, social, and environmental policies, delays could occur in the bidding and execution processes, which would in turn delay the	Medium-high	Strengthening and training on IDB fiduciary policies to the program execution unit and to other ETAPA EP departments and hiring of experts to support fiduciary management and

Risk taxonomy	Risk	Risk level	Risk response
	contracted works and services and disrupt the timeline and the fulfillment of program objectives during the planned timeframe.		provide technical support for critical procurement processes.
Organizational structure	Without well-defined processes for institutional coordination between ETAPA EP's various departments, efficient planning and execution will be impossible, leading to problems during startup, execution, and payment of programmed activities, in addition to delays in submitting information to meet contractual conditions and submitting vouchers and disbursement requests, resulting in deviations in programming and fulfillment of program objectives.	Medium-high	The Program Operating Regulations will specify the mechanisms for coordination between the program execution unit and ETAPA EP's other departments.

5. **Policies and guidelines applicable to the operation:** Policies and guidelines applicable to the operation: Policies for the procurement of IDB-financed goods and works (GN-2349-15) and for the selection and contracting of IDB-financed consultants (GN-2350-15).

II. CONSIDERATIONS FOR THE SPECIAL PROVISIONS OF THE LOAN CONTRACT

No special fiduciary conditions precedent to the first disbursement are anticipated.
Exchange rate: For the purposes of Article 4.10 of the General Conditions, the parties agree that the exchange rate to be used will be the rate stipulated in Article 4.10(b)(ii). For purposes of determining the equivalency of expenditures incurred in local currency chargeable against the local contribution or for reimbursement of expenditures charged against the loan, the exchange rate will be the rate in effect on the date on which the borrower, the executing agency, or any other person or corporation with delegated authority to incur expenditures makes the respective payments to the contractor, vendor, or beneficiary.
For the purposes of rendering accounts during execution, audited special-purpose annual financial statements for the program will be submitted by an external independent audit firm acceptable to the Bank within 120 days after the close of each fiscal year and the date of the final disbursement. The independent audit firm will be contracted at least 120 days before the end of each fiscal year and the date of the final disbursement. These financial statements will be prepared monthly throughout program execution.

III. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

<table>
<tr><td>Bidding documents</td><td>For the procurement of works, goods, and nonconsulting services executed in accordance with the procurement policies (GN-2349-15) and subject to international competitive bidding, the Bank's standard bidding documents or those agreed between the executing agency and the Bank for the procurement in question will be used. The selection and contracting of consulting services will be carried out in accordance with the policies for the selection of consultants (GN-2350-15), and the standard request for proposals issued by the Bank or agreed between the executing agency and the Bank for the selection in question will be used. The sector specialist will be responsible for reviewing specifications and terms of reference during the preparation of selection processes. This technical review may be done on an ex ante basis, regardless of the review method used for procurement.</td></tr>
<tr><td>Procurement supervision</td><td>The supervision method will be ex post, except where ex ante supervision is warranted. Procurements executed using the country system will be supervised using the country's national supervision system. The supervision method (ex ante, ex post, or country system) will be determined for each selection process. Ex post reviews will be performed each year in accordance with the program's supervision plan, which is subject to change during execution. Ex post review reports will include at least one visit. The inspection will be to verify the existence of the procurement, leaving verification of quality and adherence to specifications up to the sector specialist. These physical inspections will be done for 10% of procurement processes subject to ex post review. The threshold amounts for ex post review are as follows:
<table>
<tr><th>Executing agency</th><th>Works</th><th>Goods / services</th><th>Consulting services</th></tr>
<tr><td>ETAPA</td><td>US$1,500,000</td><td>US$200,000</td><td>US$150,000</td></tr>
</table></td></tr>
<tr><td>Records and files</td><td>ETAPA will maintain orderly, complete files, organizing them chronologically, separately, and by process and by financing source. The file for Bank inspection and supervision, including, at the Bank's request, procurement subject to ex post review, will mainly be available on the Fiduciary Interface platform.</td></tr>
</table>

Main procurements

Procurement description	Selection method	New procedures / tools	Estimated date	Estimated amount (US$000)
Works				
Group 1: sewerage and drinking water systems, 6 sites	National competitive bidding (NCB)		Jan/26	1,850
Program to reduce infiltration and inflow			Mar/26	1,000
Program to reduce infiltration and inflow, Phase II			Mar/27	3,000
System for reusing water from the Ucubamba wastewater treatment plant			May/26	500
El Valle, Santa Ana, and Quingeo drinking water system	International competitive bidding (ICB)		Aug/26	21,600
Raw water pipeline for the El Cebollar wastewater treatment plant			Aug /26	10,000
Upgrade of processes at El Cebollar wastewater treatment plant			Aug /28	6,500
Tixán-El Cebollar treated water pipeline	ICB		Aug /27	3,000
Strategic nonrevenue water project			Apr/26	5,000
Post-dewatering plant			Apr/26	18,275
Group 2: Expansion of sewerage system in parish of Tarqui, drinking water system in El Cisne, sewerage systems in San Miguel (Ricaurte) and San Judas (El Valle)			Mar/26	3,450
Nonconsulting services				
Vehicle rental	Shopping, by open invitation		Dec/25	52
Firms				
Auditing firm	Quality-based selection		Oct/25	250
Works supervision (minor scale)	Selection based on the		Mar/27	300

Procurement description	Selection method	New procedures / tools	Estimated date	Estimated amount (US$000)
	consultants' qualifications (CQS)			
Gender and Diversity Action Plan	CQS		May/26	100
Optimization of ETAPA critical processes and digital transformation			Jan/26	280
Design of Innovation Plan			Mar/26	100
Midterm evaluation			Nov/26	70
Final evaluation			May/29	150
Restructuring of ETAPA	Quality- and cost-based selection (QCBS)		Apr/26	1.300
Design and implementation of pilot plan for own power generation			Jan/26	250
Cuenca Water and Sanitation Master Plan			Jan/26	3.000
Design and implementation of Comprehensive Institutional Competency-building System			Nov/25	600
Emergency infrastructure improvement plan	QCBS		Oct/25	250
Supervision of water and sanitation works (5 contracts)			Feb/26	3.050
Individuals				
Management team advising the program execution unit	Individual consultant selection by open invitation		Dec/25	561
Works supervisors	Individual consultant selection (3 CVs)		Mar/26	75

To access the procurement plan, click here.

IV. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

Programming and budget	The Code of Planning and Public Finance, which regulates budget programming, formulation, approval, execution, control, evaluation, and liquidation, applies to Bank-financed programs in Ecuador. The integrated system CGWEB standardizes the application of these regulations in national public management. ETAPA EP will ensure timely incorporation of the program budget, securing annual and multiyear budget allocations and meeting the prerequisites for program procurement. ETAPA EP will control and monitor budget execution using the CGWEB system.
Treasury and disbursements	To manage the loan proceeds, a U.S. dollar-denominated bank account will be opened in the name of ETAPA EP with the Central Bank of Ecuador for exclusive program use. Funds will be disbursed into this account and processed through the Client Portal. Program payments will be made from this account and recorded in the CGWEB system. Given that these resources are not part of the general State budget, they will not be managed through the Treasury Single Account. The Bank will advance funds in U.S. dollars based on liquidity needs, in accordance with the financial plan and cash flow, for a period of up to six months. ETAPA EP will prepare disbursement requests and render accounts pursuant to OP-273-12 or its updates. After the first advance, accounts will have to be rendered for at least 80% of the cumulative balance pending substantiation. The Bank and/or the external auditors will review payment documentation on an ex post basis.
Accounting, information systems, and reporting	ETAPA EP applies government accounting standards and is beginning to converge towards International Financial Reporting Standards. The official currency and reporting currency is the U.S. dollar. ETAPA EP uses the CGWEB Financial Management System, which integrates: (i) budget processes for expenditure execution, (ii) accounting processes to record transactions using the accrual method, and (iii) cash management processes for payments to suppliers and contractors. The program's accounts will be recorded in CGWEB using the accrual method. However, the program's financial statements, which must follow the cash method, will not be generated automatically. ETAPA EP will prepare the program's financial statements manually on a monthly basis, based on the CGWEB accounting reports. The financial statements include the statement of cash receipts and disbursements and the statement of cumulative investments, with their respective notes. The program Operating Regulations, which document workflows and internal controls, will be used as a supplement to the applicable policies and guidelines.
Internal control and internal auditing	The Constitution of Ecuador sets forth that the Office of the Comptroller General (CGE) is the highest government control and public management auditing authority. ETAPA, being a public-sector entity, has an internal audit unit that reports directly to the CGE.

External control and financial reports	The CGE may audit public-sector entities, but projects are not always part of its annual audit plan. For purposes of rendering accounts during execution, an independent audit firm acceptable to the Bank and engaged by ETAPA EP will perform annual program audits in accordance with IDB requirements (OP-273-12, as updated). The firm will be engaged prior to 31 August of each audit year and may be paid from the loan proceeds. A single contracting process for the entire program implementation period is recommended. The audited program financial statements will be submitted to the IDB annually within 120 days following the close of each ETAPA EP fiscal year or, in the case of the final audit, 120 days following the date of the last disbursement or extensions thereof. Ecuador has no national policy for public disclosure of audit reports. Nevertheless, pursuant to the Bank's information access and disclosure policy, the audited program financial statements must be published in the Bank's systems.
Financial supervision of the operation	The Bank's financial specialist will conduct onsite reviews based on the risk assessment and desk reviews of audited financial statements. The auditor will verify that resources are being executed in accordance with the Bank's fiduciary policies and the conditions set out in the Program Operating Regulations. Fiduciary oversight visits will include verification of the fiduciary arrangements and monitoring of the implementation of recommendations issued by the independent audit firm when applicable.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-__/25

Ecuador. Loan ____/OC-EC to Empresa Publica Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA EP)
Water and Sanitation Program for the Canton of Cuenca

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with Empresa Publica Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA EP), as borrower, and with the Republic of Ecuador and the Municipal Decentralized Autonomous Government of the Canton of Cuenca, as guarantors, for the purpose of granting ETAPA EP a financing to cooperate in the execution of the Water and Sanitation Program for the Canton of Cuenca. Such financing will be for the amount of up to US$70,000,000 from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on ___ _____ 2025)

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