TC Document

I. Basic Information for TC

▪ Country/Region:	COLOMBIA
▪ TC Name:	Energy Efficiency for the Transition to Carbon Neutral Cities in Colombia
▪ TC Number:	CO-T1679
▪ Team Leader/Members:	Hobbs, Jason Anthony (CSD/HUD) Team Leader; Sandoval, Jose Manuel (CSD/CCS) Alternate Team Leader; Planas Marti, Maria Alexandra (INE/ENE); Crausaz Sarzosa, Ernesto Patricio (VPC/FMP); Alexandra Alvear (INE/INE); Jimenez Vargas Maria Margarita (CSD/CCS); Escudero, Carolina (VPC/FMP); Romano, Catalina (CSD/HUD); Bravo Meneses Carolina Marcela (VPC/FMP); Avila, Francy Dianela (CSD/HUD); Rojas Acuna, Monica (CAN/CCO); Mahecha Barbosa, Maria Fernanda (VPC/FMP); Silvia Perez (CSD/HUD); Merchan Paladines, Vianca Tatiana (VPC/FMP); Castaneda Abril Jairo Arturo (CSD/HUD); Diaz Gill Virginia Maria (LEG/SGO); Sofia Del Castillo (CSD/HUD)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	
▪ Date of TC Abstract authorization:	October 6th 2023
▪ Beneficiary:	Colombia via the Ministry of Environment and Sustainable Development
▪ Executing Agency and contact name:	Consejo Colombiano De Construccion Sostenible
▪ Donors providing funding:	IADB/Global Environment Facility Fund(FMM)
▪ IDB Funding Requested:	US$1,812,349.00
▪ Local counterpart funding, if any:	US$15,140,447.00 (Cash)
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	May 2024
▪ Types of consultants:	Firms and Individuals
▪ Prepared by Unit:	CSD/HUD-Housing & Urban Development
▪ Unit of Disbursement Responsibility:	CAN/CCO-Country Office Colombia
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2024-2030:	Environmental sustainability; Institutional capacity and rule of law; None

II. Objectives and Justification of the TC

2.1 **Background**. The Government of Colombia requested the support of the Development Bank of Latin America (Banco de Desarrollo de América Latina (CAF)) and the Inter-American Development Bank (IDB) to present a joint project to the Global Environment Facility (GEF) to implement national carbon neutrality strategies in the

construction sector for a total of US$7.9 million in GEF project financing. The project will be processed before the donor as a Stand-Alone Full-Sized Project (FSP) with resources from the Climate Change window. The FSP includes three components: (i) Governance for Energy Efficiency in Buildings and Public Spaces (US$1.3 million - IDB); (ii) Pilots of Energy Efficient Buildings and Public Spaces (US$5.5 million - CAF); (iii) Project Management, Dissemination and Knowledge Management (US$764,000 – jointly managed by IDB & CAF); and Project Management Costs (PMC) (US$377,000). The Project Identification Form (PIF) was submitted and approved by the GEF in June 2022. The portion of GEF resources allocated to the IDB will be processed through this Technical Cooperation operation (TC). The project will be implemented by CAF and the IDB, serving as GEF implementing agencies. CAF and the IDB will provide technical expertise and guidance throughout the project, particularly in the annual planning of activities to achieve project outputs and outcomes. Moreover, both CAF and the IDB will ensure proper quality control and compliance with project management and fiduciary responsibilities.

2.2 **Objectives.** The general objective of the project is to contribute to reducing CO_2 emissions by increasing energy efficiency in the construction sector, particularly in the cities of Barranquilla, Cali and Pasto, through the development of actions that involve different stages of the life cycle of buildings and interventions in public space, by achieving the following outcomes: (i) enhanced local institutional capacity through the provision of technical, normative, and methodological tools; and (ii) improved organizational knowledge sharing and dissemination through the development of knowledge management communications. The project addresses the barriers identified while preparing the PIF (see Context and Justification) related to energy efficiency in buildings and public spaces in Colombia, consistent with the need to reduce the associated greenhouse gas (GHG) emissions.

2.3 The IDB is uniquely positioned to support the Colombian government with this project, drawing upon its extensive experience in the climate agenda in Latin America and the Caribbean. This includes a track record in strengthening low-carbon policies and regulatory frameworks across various greenhouse gas emissions-intensive sectors, such as buildings, as seen in this case. Moreover, the IDB has decades of experience in implementing GEF projects in Colombia, including notable initiatives such as the GEF Project in Ciénaga Grande de Santa Marta, the GEF project in Chingaza-Sumapaz-Guerrero Paramos, and its involvement in the voluntary carbon markets in Colombia. This knowledge and past successes position the IDB as a valuable partner in driving forward this current initiative.

2.4 **Beneficiaries**. The main beneficiary of this initiative is the Colombian government, represented by the Ministry of Environment and Sustainable Development. The Ministry selected three beneficiary cities based on various technical criteria, which included factors like representing different climate regions as outlined in Resolution 549 of 2015, census data on buildings, and the cities' development in sustainable construction projects. The result of this validation process was the prioritization and selection of Barranquilla, Cali, and Pasto as the cities to benefit and where the GEF

project will intervene. The goal of the GEF project is to directly benefit 913,535 men and 992,617 women, in alignment with the objectives of the GEF full project.

2.5 **Context and Justification.** The residential, public, and commercial sectors can be considered the sectors with the highest impact and relevance regarding energy efficiency in Colombia. According to the Colombian Energy Balance (BECO, for its acronym in Spanish), these sectors have a final energy consumption that represents approximately 25% of final energy consumption nationwide, and about 30% of total energy consumption comes from building construction in Colombia, also one of the main generators of GHG emissions. Although Colombia has made progress on energy efficiency in the construction of buildings and public spaces, there are still barriers that must be overcome. During the formulation of the PIF, the following four barriers were identified:

2.6 *Barrier 1: Governance of the Construction Sector.* Even though there has been made significant progress in the formulation of policies and regulations on sustainable and low-carbon buildings, there is much work to be done to upgrade existing regulations and guidelines to make them responsive to requirements for achieving carbon neutrality and energy efficiency in line with the goals defined in the National Determined Contributions (NDC) and the E2050 Strategy.[1] Current policies for energy-efficient buildings require a more robust and comprehensive regulatory development that involves the entire life cycle of buildings. There needs to be more appropriate monitoring and verification systems to ensure compliance by the construction sector. There are still gaps in the sustainability criteria addressing energy efficiency in the design, construction, and operation of buildings and public spaces. This prevents builders from knowing the recommendations and guidelines for optimizing their processes. In addition, new energy efficiency parameters for buildings will require updates to Resolution 549 of 2015, enabling for greater certainty regarding the construction sector's role in reducing GHG emissions and providing clarity on the norms and standards that new Colombian buildings must adhere to. Governance of the construction sector requires reforms and strengthening the legal and institutional frameworks and monitoring mechanisms to implement the E2050 effectively and, by extension, achieve carbon neutrality and energy efficiency in the construction sector.

2.7 *Barrier 2: Lack of Incentives for Applying Energy Efficiency in Sustainability Criteria in Construction Projects, Works, and Activities.* According to the publication 'State of Sustainable Construction in Colombia 2021', carried out by the Colombian Green Building Council, all participants of the value chain, that is, suppliers, manufacturers, operators, designers, consultants, builders, and developers, identify the main barriers as lack of incentives from the government and additional investments in direct project costs, including those associated with energy efficiency.

2.8 *Barrier 3: Lack of Knowledge, Skills, and Capacities for Energy-efficient Construction at the Local Level.* During the consultation phase of the PIF, the lack of advisory

[1] E2050 Colombia: Long Term Climate Strategy.

knowledge in the country in the use of advanced technologies was identified by builders and developers as an additional barrier. Designers, consultants, manufacturers, and suppliers agree in their perception of the lack of demand in the market since there are different obstacles to its consolidation for sustainable energy-efficient buildings for decarbonization.

2.9 *Barrier 4: Lack of Evaluation and Monitoring Mechanisms.* Institutional actors at the local level in several Colombian cities identified as a barrier the lack of tools that would allow the evaluation of energy efficiency in sustainable construction projects, works or activities in public spaces or buildings, as well as obtaining data from variation in terms of emission reduction by the sustainability criteria applied. The absence of information hinders the correct application of sustainable standards during the construction life cycle and prevents an adequate evaluation to be made for decision-making for the city in terms of mitigating GHG emissions and reducing environmental impacts.

2.10 The cities of Barranquilla, Cali, and Pasto have proactively implemented measures to decrease CO_2 emissions from buildings. These cities have utilized various tools, such as greenhouse gas (GHG) inventories. Additionally, Cali has developed a sustainable construction manual (Javeriana University, WRI; 2022) that incorporates energy efficiency criteria for buildings and public spaces. The Ministry of Environment has collaborated with these cities within the framework of the Biodiverse and Resilient Cities initiative.

2.11 **Strategic Alignment**. The TC is consistent with the IDB Group Institutional Strategy Transforming for Scale and Impact (CA-631), and it is aligned with the objectives of: (i) Address Climate Change, through the reduction of GHG emissions of buildings and public spaces; and (ii) Bolster Sustainable Regional Growth, through the promotion of investments in sustainable infrastructure. The TC is also aligned with the operational focus areas of: (i) Biodiversity, Natural Capital, and Climate Action; (ii) Institutional Capacity, Rule of Law and Citizen Security; and (iii) Sustainable, Resilient, and Inclusive Infrastructure with an Emphasis on Regional Integration. The TC is also consistent with the IDB Group Country Strategy with Colombia 2019-2022 (GN-2972) on the topics of: (i) Productivity in the Economy; (ii) Effectiveness of Public Management; and (iii) Climate Change. In addition, it supports the Housing and Urban Development Sector Framework (GN-2732-11) by contributing to the challenges of mitigation and resilience to climate change, productivity, and urban governance. Likewise, it supports the Climate Change Sector Framework (GN2835-13) in terms of climate action by institutions, availability and access to knowledge and innovation for climate action, and the integration of climate change considerations in the sectors.

2.12 Additionally, the TC is aligned with national policies, strategies, and goals, including the updated Nationally Determined Contribution (NDC) of Colombia under the Paris Agreement (2020), E2050, the National Climate Change Policy, the Green Growth Policy (CONPES 3934 of 2018), the National Policy for Sustainable Buildings (CONPES 3919 of 2018) and the Comprehensive Climate Change Management Plan for the Housing, City, and Territory Sector (MINVIVIENDA Resolution 431 of 2020).

2.13 The TC also aligns with the GEF-7 Climate Change Focal Area Strategy, particularly the objective 1 that *promotes innovation and technology transfer for sustainable energy breakthroughs,* by the creation of mechanisms that allow the implementation of groundbreaking measures to improve energy efficiency in buildings and public spaces; and the objective 3 to *foster enabling conditions for mainstreaming mitigation concerns into sustainable development strategies,* through the formulation of public policy, standards and incentives, among other mitigation measures for the built environment.

III. Description of Activities/Components and Budget

3.1 **Component 1. Governance for Sustainable Construction (US$1,294,647).** The intended outcome of this component is to strengthen local institutional capacity by providing technical, normative, and methodological tools through financial support, which includes: (i) developing and adopting national standards for energy efficiency in buildings and public spaces; (ii) developing monitoring, reporting and verification mechanism to guarantee the implementation of the norms, standards and protocols for energy efficient buildings and public spaces; (iii) developing plans for energy efficient buildings and public space in Barranquilla, Cali, and Pasto formulated and under implementation; (iv) creating a capacity Building Program for local governments, construction stakeholders, and financial institutions, inclusive of technical assistance and training for the implementation of energy efficient buildings, public space and green infrastructure developed and implemented; (v) developing a virtual platform for the evaluation of projects, works or activities of energy efficient buildings in public space designed and implemented; and (vi) developing a financing strategy for energy efficiency projects with both public resources and financial mechanisms through a triple alliance between the National Government, the construction sector, and the financial sector.

3.2 **Component 2. Project Dissemination and Knowledge Management (US$430,000).** The intended outcome of this component is improved organizational knowledge sharing and dissemination, through financial support which includes: (i) develop a cross-sectoral communication strategy to raise awareness and educate professionals, policy makers, builders and the general public about the environmental, economic, and social benefits of sustainable construction in the beneficiary cities; (ii) exchange visits to promote upscaling project results, enhance knowledge transfer and foster the adoption of successful practices and lessons learned across other cities of Colombia and internationally, thereby maximizing the impact of the project's efforts on a broader scale; and (iii) the implementation of the monitoring and evaluation activities specified in section IV of this document.

3.3 **Administration and Auditing (US$87,702).** It finances staff that complement the executing agency staff. It includes: (i) a National Project Coordinator; (ii) an Energy Efficiency & Climate Change Specialist; (iii) a Public Spaces Expert, Safeguards &

Gender Specialist[2] (on a part-time basis); (iv) a Financial & Procurement Specialist; and (v) Municipal Technical Liaison in each of the three municipalities. It also includes costs related to external audits.

3.4 **Budget**. The total amount financed through the operation is US$1,812,349, financed by the Global Environment Facility (GEF). The local counterpart for Component 1 and Component 2 amounts to US$15,140,447, and will be provided by the cities of Barranquilla, Cali, and Pasto through co-financing letters as a commitment to the GEF project.

Table 1. Indicative Budget (US$)

Activity/Component	IDB/GEF	Counterpart Funding	Total Funding
Component 1: Governance for Sustainable Construction	1,294,647	9,614,563	10,909,210
Component 2: Project Dissemination and Knowledge Management	430,000	5,083,804	5,513,804
Administration and Auditing	87,702	442,080	529,782
Total	1,812,349	15,140,447	16,958,796

IV. Executing Agency and Execution Structure

4.1 The Colombian Green Building Council (CCCS) will execute the TC, and the CSD/HUD project team will carry out technical supervision for the activities of the Components 1 and 2 of the TC. The latest corresponds to the Outcome 2 of the Component 3 of the GEF project. While the studies are being implemented, workshops will be held with local technical staff to transfer knowledge, aimed primarily at officials from the institutions involved.

4.2 A complete institutional capacity evaluation of CCCS was performed, and it concluded that it has the capacities and resources to manage IDB-financed programs. The CCCS is a technical non-profit organization that gathers more than 160 members of the construction value chain, and that has developed multiple actions and research to incorporate the sustainability approach in the construction sector since 2008. It also has previous experience with similar programs, having successfully co-executed the Net Zero Carbon Building Accelerator project, financed by the Global Environment Facility (GEF).

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[2] The Executing Agency is the same for CAF and IDB. The IDB and GEF agreed that the implementation of Component 1 will integrate gender perspectives through diagnostic documents, regulatory analysis, and recommendations. Additionally, training program will address gender and diversity. However, the main gender activities are considered under Component 2 of the GEF project, implemented by CAF, which integrate gender perspectives by implementing gender actions and measures within the Sustainable Construction Manual criteria and monitoring systems. Differential business models for social housing will include explicit gender considerations, while impact measurement tools will utilize disaggregated data and gender indicators, covering equitable resource access, participation, empowerment, and gender gap reduction.

4.3 The CCCS has collaborated closely with both local and national authorities. They crafted a Net Zero Carbon Building Roadmap in partnership with the World Resources Institute (WRI) and the United Nations Environment Program (UNEP). This initiative was spearheaded by the Ministry of Environment, with active involvement from the Ministry of Housing advisory committee, the National Planning Department (DNP), the Ministry of Energy, Camacol and the Planning Secretariats of Cali and Bogotá. Several of these entities are actively engaged in this project.

4.4 **Institutional Arrangements**. A Project Steering Committee (PSC) will be established by the CCCS, who will perform tasks of Secretariat for the PSC. The PSC will comprise of representatives of the Ministry of the Environment and Sustainable, the Ministry of Housing and Territory, UPME, Municipalities of Barranquilla, Cali and Pasto, CAF, and IDB. The PSC is responsible for ensuring that the project meets goals announced in the Project Results Framework by helping to balance conflicting priorities and resources. Conclusions and recommendations produced by the PSC will be used by CCCS to modify implementation strategies, annual work plans and resources allocation budget and, when necessary, to adjust the project's Result Framework in consultation with CAF, IDB, and Ministry of Environment. This committee will meet every six months, either physically or virtually.

4.5 Additionally, a Technical Advisory Committee (TAC) will be appointed to provide technical supervision, guidance, and support during project implementation. The TAC is also responsible for reviewing and providing recommendations on the project's methodological processes and technical quality to the Project Executing Unit for their consideration. The membership of the TAC will include the Ministry of Environment and Sustainable Development, Ministry of Housing and Territory, DNP, UPME (Sub-Directorate for Demand) CCCS, City Committee of Barranquilla, Cali, and Pasto, Regional and Local Environmental Authorities, Chamber of Commerce, Trade Unions, Civil Society, academia, CAF[3], and IDB.

4.6 **Conditions precedent to the first disbursement**. The first disbursement of the TC resources will be subject to compliance, to the Bank's satisfaction, with the following conditions: (i) CCCS must demonstrate the selection of a general coordinator, an administrative specialist, and a financial specialist; and (ii) CCCS must obtain the

[3] The CAF and the IDB are GEF co-implementing agencies for this project and therefore coordinate with each other for all aspects pertaining to the supervision of the project's execution, which include monitoring, evaluation, and reporting to the GEF Secretariat. The CAF is tasked with the overall responsibility of ensuring that GEF policies and criteria are adhered to and that the project meets its objectives and delivers on expected outcomes. However, the IDB's role is key in providing inputs to the CAF regarding the outputs/components under its implementation. Other specific responsibilities of these implementing agencies include ensuring compliance with GEF policies and standards for results-based M&E, fiduciary oversight, safeguards compliance, project budget approvals, technical guidance and oversight of project outputs, approval of Project Implementation Reviews (PIRs), participation in the project's superior governance structure, conducting the project's mid-term review, and preparation of the project's Terminal Evaluation. As described above, the Project Steering Committee (of which the CAF Task Manager and the IDB project team leaders are members), CCCS, and Ministry of Environment will also have direct oversight roles, as part of the internal oversight mechanism of the project.

Bank's approval regarding its financial information system and internal control structure.

4.7 **Procurement.** The CCCS will be responsible for the procurement of goods and the selection and hiring of consultants in accordance with the Bank's policies: "Policies for the Procurement of Goods and Works Financed by the IDB" (GN-2349-15), "Policies for the Selection and Hiring of Consultants Financed by the IDB" (GN-2350-15), and the Operational Procurement Guide (OP-639). Additionally, a Procurement Plan for the first 18 months of implementation will be agreed upon, which may be updated in the event of substantial changes. Any proposed revisions to the Procurement Plan must be agreed upon and approved by the Bank.

4.8 The Bank's supervision of the CCCS procurement and hiring activities will be conducted ex-ante, considering that they lack previous experience in executing IDB projects. Disbursements will be monitored under the ex-post modality, for which the executing agency must have: (i) an acceptable financial information system for the Bank, enabling accounting, budgetary, and financial recording, as well as the issuance of financial statements and other reports related to IDB and other sources of funding, if applicable; and (ii) an internal control structure that facilitates the effective management of the project, provides reliable financial information, and maintains electronic records and files, ensuring compliance with the prescribed provisions.

4.9 **Audit.** The annual financial statements will be audited by an independent audit firm acceptable to the Bank, contracted by the CCCS. The statements will be submitted 120 days after the close of each fiscal year, during the original disbursement period or extensions thereto. The final audited financial statement will be submitted within 120 days following the date of the final disbursement.

4.10 **Monitoring.** Within 30 days following the end of each six-calendar-month period during execution, the CCCS will send a report to the Bank on the progress made on the activities in each of the components. The report will include information on: (i) fulfillment of the established technical and financial targets, explanation of deviations, and corrective measures; (ii) compliance, by the producers, technology suppliers, associations, beneficiary institutions, and partner agencies, with the terms established in the agreement/contracts signed for the project; and (iii) progress on outcomes. The reports on the second half of the year will include the annual work plan for the upcoming calendar year, with updated disbursement, procurement, and risk management plans.

4.11 **Evaluation.** The GEF Monitoring and Evaluation Policy mandates that every full-sized GEF project must be evaluated upon completion. The CCCS will submit the following to the Bank: (i) a midterm evaluation report, 90 days after the date on which 50% of the TC funds have been disbursed or when the execution period is half over, whichever occurs first; and (ii) a final evaluation, 90 days after the date on which 90% of the TC funds have been disbursed. Per GEF guidelines, the evaluation will include an analysis of: (i) program performance additionality; (ii) relevance and coherence;

(iii) effectiveness; (iv) efficiency; (v) sustainability; (vi) role of GEF implementing agencies; (vii) program implementation; and (viii) knowledge management.

4.12 Any knowledge products generated within the framework of this technical cooperation will be the property of the Bank and may be made available to the public under a creative commons license. However, upon request, the intellectual property of said products may also be licensed and/or transferred to one or more beneficiaries through specific agreements.

V. Major Issues

5.1 One of the main risks of this operation is the lack of data and information necessary to carry out the studies in the prioritized cities. To mitigate this risk, work will be done in coordination with national institutions such as the Ministry of Housing and the Ministry of Environment and, at a local level, with the municipalities to guarantee access to data and information.

5.2 There are risks associated with the National Government's capacity to promote green building policies, monitor climate target implementation, and officially adopt inputs generated by this project. These challenges may result in delays in updating policies. Furthermore, there may be issues with the capacity of subnational governments to contribute to the formulation of subnational plans. To mitigate this, CCCS will offer continuous technical support to local governments. Additionally, difficulties in engaging key stakeholders from the private sector and financial sectors are anticipated, and the executing agency aims to address this by involving these stakeholders early in the project.

VI. Exceptions to Bank Policy

6.1 No exceptions to Bank policies have been identified for this operation.

VII. Environmental and Social Strategy

7.1 For this GEF financed project, an Environmental and Social Safeguards Screening filter was applied vis a vis the Environmental and Social Policy Framework at the stage of Technical Cooperation (TC) Document and GEF CEO endorsement level. It is important to highlight that this TC will not finance prefeasibility or feasibility studies of specific investment projects with associated environmental and social studies and the risk rating is therefore low. The GEF resources will fund capacity building of local institutions and knowledge management and communications activities, which do not present risks of environmental or social impacts nature.

Required Annexes:

Request from the Client_14814.pdf

Results Matrix_79986.pdf

Terms of Reference_51809.pdf

Procurement Plan_90923.pdf