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Control Risks



Powering the Future

**Uncovering Myths and Navigating Risks for
Renewable Energy in Colombia**

February 2022

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Introduction

Energy transition has been one of the main policies of the Duque administration. The government has focused, among others, on the massification of non-conventional renewable energies and the adoption of new technologies for energy generation.

Through various public policy mechanisms, the participation of non-conventional renewable energies, specifically solar and wind, will increase from 2% in the electricity generation matrix of the country in 2018 to 16% in 2023. Additionally, the government will structure the roadmap to position other non-conventional renewable energies, such as geothermal, offshore wind and hydrogen.

This public policy has generated interest from national and international actors that are interested in participating both in energy auction processes and projects to provide energy solutions for non-interconnected users. It has also brought Colombia international recognition, including being referenced as one of the countries with the greatest progress in energy transition policies¹.

However, the implementation of this ambitious agenda must be accompanied by adequate risk management strategies to ensure that these projects are successful, and to effectively make the transformation of Colombia's electricity generation a reality.

In an effort to guide investors in this task, Control Risks, a global risk management consulting firm, and specialists from Brigard & Urrutia, a leading law firm in Colombia, have prepared this white paper². From a risk management perspective, the purpose of this document is to facilitate decision-making on investments and operations in the renewable energy sector in Colombia. In this analysis we therefore break down some of the main realities, identify common myths and misconceptions, and propose practical strategies to manage the risks associated with the sector.

In the first section we outline some of the main opportunities, and in the second we analyze five realities that every investor or operator should bear in mind when making decisions. In the third section, we identify five myths or perceptions that often confuse investors, either because they ignore them or because they sometimes overestimate them. Finally, we propose a multilevel strategy to effectively address the regulatory, legal, security and environmental challenges that this new context implies.

¹ Colombia ranks 25th out of 115 in the World Economic Forum's 2020 Energy Transition Index.

² Carolina Rojas Hayes, former Vice minister of Mines and public policy expert in various fields, advised Control Risks and contributed to the analysis and drafting of this document.

Opportunities

Colombia has one of the cleanest energy matrices in the world, largely due to the availability of water resources³. The dependence on hydroelectric energy makes Colombia a country highly vulnerable to climate fluctuations, where phenomena such as “El Niño” produce prolonged periods of drought that affect the continuity of hydroelectric energy supply. This, together with Colombia’s global commitment to greenhouse gas mitigation, led President Duque’s government to prioritize the diversification of the energy grid towards non-conventional renewable energy sources.

Colombia has been positioning itself as an interesting destination for this type of energy market. Through three long-term power purchase agreements bids⁴, 20 projects have been assigned (14 solar and 6 wind) worth more than USD 3 billion in investments, which will generate 2,169 MW and (in addition to the construction of private plants) will contribute 3,788 MW to power generation. Generation from non-conventional renewable energy sources will increase from 1% to 16% of the country’s electricity generation.

Two main reasons explain the leap in the participation of non-conventional energy in Colombia: the country’s potential, and a robust regulatory and institutional framework with incentives for investors.

a) Colombia’s potential

Colombia’s geographical position makes it especially attractive for the generation of non-conventional renewable energies.

Located on the equator, Colombia has high solar radiation (with levels 60% higher than the world average) in departments such as La Guajira in the north of the country. The wind speed, at 9 m/s, doubles that of other places in the world, and represents a potential of 25 GW of energy.

Colombia’s location in an active tectonic zone, such as the Pacific Ring of Fire, and the presence of volcanoes such as Caldas, Risaralda and Tolima, among others, makes geothermal generation another high potential energy source. According to the Colombian Geological Service (“SGC” per its acronym in Spanish), the heat of the earth through water generates a potential geothermal resource of 136.6 Joules, which could add 1,200 MW of power generation to the system. To take advantage of this potential, pilot projects are being developed in the departments of Casanare and Caldas for self-generation and local energy supply.

The country also has potential in biomass (which, according to Procolombia, could supply 46% of the national energy demand) and offshore wind energy, and pilot projects are also being carried out in these fields with the support of multilateral and bilateral donors.

Finally, the abundance of non-conventional renewable resources makes Colombia a particularly attractive country for hydrogen production. This energy source will complement efforts to decarbonize the economy in sectors such as industry and transport, which account for 22% and 40% of the country’s energy demand, respectively. It is expected that by 2030 there could be between 1 and 3 GW of installed electrolysis capacity for green hydrogen (produced through an electrolysis process using non-conventional renewable sources) at competitive prices of 1.7 USD/kg and 50 kt of blue hydrogen, by capturing CO₂ from gas and coal.

b) There is a strong public policy for the sector

Colombia has developed a set of policies and regulations aimed at consolidating the energy transition.

Law 1715 of 2014, known as the Renewable Energy Law (and its subsequent regulation⁵), regulates the integration of non-conventional renewable energies into the National Energy System and introduces the auction mechanism for the execution of long-term power purchase agreements for projects of this type of energy⁶.

The government also contracted, together with the Inter-American Development Bank, the Mission for Energy Transformation (“MTE”, per its acronym in Spanish). This body, made up of 20 national and foreign experts, was tasked with outlining the roadmap for the “energy of the future” in Colombia. The MTE laid the foundations for a structural transition in five major areas: (i) natural gas, (ii) decentralization, digitalization, and efficient demand management in the energy market, (iii) closing gaps, (iv) competition rules, participation, and market structure, and (v) revision of the institutional and regulatory framework.

In 2021, Congress enacted Law 2099 of 2021, also known as the Energy Transformation Law, which focused on: (i) the consolidation of the development of generation projects from renewable energies, by establishing additional incentives and simplifying procedures for obtaining land and environmental permits; (ii) promoting the production of green hydrogen and blue hydrogen by establishing or extending tax incentives applicable to renewable energies, (iii) the generation of energy from the use of geothermal resources, and (iv) the implementation of carbon capture and storage technology.

Finally, the government published the Hydrogen Roadmap in October 2021, and announced in November 2021 that it will publish the offshore wind roadmap in the first quarter of 2022.

³ Of the generation capacity of 17.3 GW, 68% comes from hydroelectric power, 31% from thermal generation (gas and coal), and the remaining 1% from cogeneration, solar and wind projects. Source: Ministry of Mines and Energy (2021)

⁴ February 2019, November 2019 and October 2021.

⁵ Decree 570 of 2015 and Resolutions 40590 and 40678 of 20195 and 40141 of 2021 of the Ministry of Mines and Energy.

⁶ Three of these auctions have already taken place, of which those of October 2019, with an average price between 0.026 and 0.029 USD/kWh, and October 2021, with average prices between 0.036 and 0.048 USD/kWh, have been successful.

Five facts for investors to consider

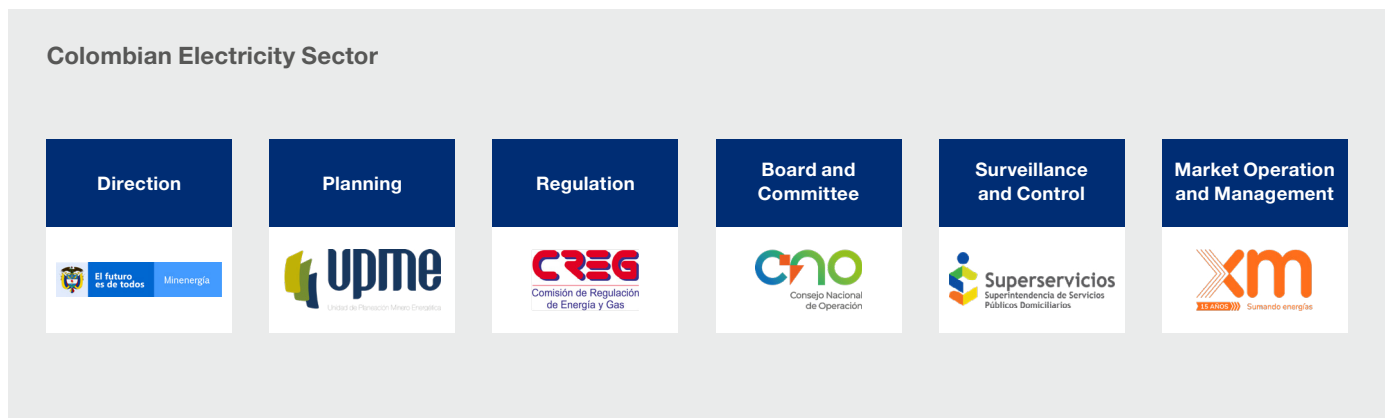


1. Existence of a solid institutional framework in the Colombian energy sector

The Colombian government has a solid and consolidated institutional structure in the electricity sector, in which various entities have clear mandates and functions. Among them, we highlight the Ministry of

Mines and Energy (“Minenergía”)⁷, the Mining and Energy Planning Unit (“UPME”, per its acronym in Spanish)⁸, the Energy and Gas Regulatory Commission (“CREG”, per its acronym in Spanish)⁹, the Superintendence of Public Utilities (“SSPD”, per its acronym in Spanish)¹⁰, the National Operation Council (“CNO”, per its acronym

in Spanish)¹¹, and XM S.A. E.S.P.¹². The institutional framework allows for an adequate distribution of public policy, regulation, planning, supervision and administration functions, which has in turn fostered the consolidation of a solid electricity market with clear game rules over the past two decades.



2. Renewable energies complement the energy supply

Non-conventional renewable energies will complement traditional energy sources. That is the main conclusion of the National Energy Plan (PEN) 2020-2050 of the UPME, which calculates different scenarios and considers factors such as technological risks, contributions to climate change mitigation and the transformation of the energy grid in order to make their projections.

The PEN assumes an increase in installed capacity from 17 GW to 40 GW, equivalent to 150%. In the most disruptive scenario, solar, wind and other non-conventional renewable energy generation sources will account for 44% of generation, while hydrogen will account for 4%. Hydroelectric power will decrease its share of the total

from 68% to 38%, but it will continue to be relevant as a source of electricity generation. Natural gas, meanwhile, will drop from 20% to 6%. *(View graph below).*

The diversification of energy generation sources in the mid-term will result in a new market dynamic. Domestic and international policy indications and technological innovations will be essential for the acceleration of the integration of renewable energies into the Colombian energy grid.

3. There are adequate incentives for local and international investors

In Colombia, there has been a constant effort to promote the development of renewable energy technologies. We highlight the following aspects:

- a) **Tax and tariff incentives:** Law 1715 of 2014 establishes four special benefits in relation to the implementation of projects based on non-conventional energy sources (“FNCE”). The scope and content of these benefits are briefly explained below, although it is important to note that the best use of these tax benefits will depend on their correct structuring. Sometimes the tax savings generated in a company may result in tax burdens at the time of dividend distribution.
 - (i) **Exclusion of VAT in the acquisition of goods and services:** prior to the import of goods or national acquisitions, the developer must obtain from UPME a certification stating that the FNCER

⁷ Responsible for the direction and design of the sectoral public policy under the guidelines of the presidency and always in accordance with the Political Constitution and the laws issued by the Congress of the Republic.

⁸ Technical body in charge of evaluating and planning the expansion of the energy industry, for which it annually publishes the Transmission and Generation Expansion Plan, which analyzes the future demand and supply of energy to establish the expansion needs of the National Interconnected System.

⁹ The CREG regulates the execution of activities in the energy and fuel gas sectors, sets electricity and fuel gas sales tariffs, establishes quality criteria for the efficient provision of residential public utilities of electricity and fuel gas, and establishes the system’s planning and coordination regulations, among others.

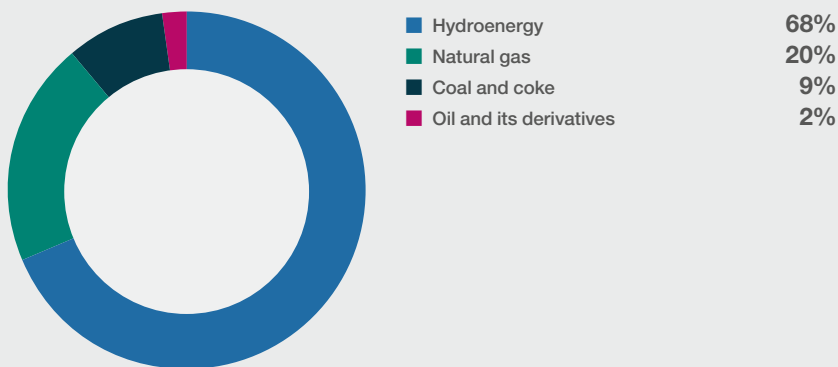
¹⁰ Provides inspection, control and surveillance functions of domiciliary public utilities providers. This means that this entity may request information from the providers on compliance with the rules of service provision and impose sanctions if appropriate.

¹¹ In charge of agreeing on the technical aspects to guarantee that the operation of the National Interconnected System is safe, reliable and economic, and of being the executor of the Operation Regulation.

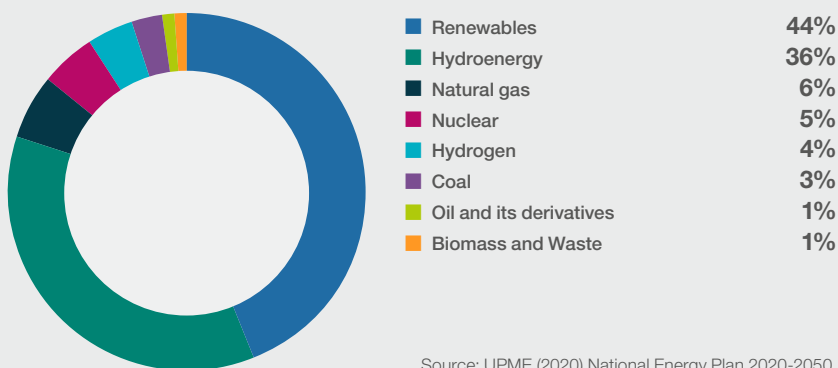
¹² Administrator of the Commercial Exchange System - “ASIC”, National Dispatch Center “CND”, Liquidator and Account Manager - “LAC”.

Composition of power generation 2019 vs. 2050 (Disruptive Scenario)

2019



2050



Source: UPME (2020) National Energy Plan 2020-2050.

project and the equipment and national or imported elements and machinery, or the acquisition of services, are excluded from sales tax. The UPME will base its decision to include these services within the VAT exclusions if they are included in the list (and its updates) drawn up by the UPME itself.

Specifically, the exclusion will be applicable to the purchase of national or imported equipment, elements, and machinery, or the acquisition of services within or outside the national territory when these are intended for new investments and pre-investments for the production and use of energy from FNCER, as well as those for the measurement and evaluation of

potential resources. This list can be found in Annex 1 of Resolution 203 of 2020, issued by the UPME.

- (ii) **Exclusion from customs duties:** this is an exemption from the payment of customs duties on machinery, equipment, materials, and inputs imports, intended exclusively for pre-investment work and investment projects with FNCER. This incentive will apply to machinery, equipment, materials, and supplies that are not produced by the national industry and their only means of acquisition is subject to their import. The exemption will apply to FNCER generation projects and must be requested before the DIAN at least 15 business days prior to import,

in accordance with the project documentation included in the certification issued by the UPME.

- (iii) **Special income tax deduction:** this is a deduction on the value of investments made directly in research and development in the field of production and use of energy from FNCER or efficient energy management. The maximum value to be deducted in a period not exceeding fifteen (15) years, counted from the taxable year following the one in which the investment has come into operation, shall be fifty percent (50%) of the total value of the investment made. However, the maximum value to be deducted for each taxable year may not exceed fifty percent (50%) of the taxpayer's net income for that year, before subtracting the deduction.
- (iv) **Accelerated Depreciation:** this benefit consists of the possibility of accelerated depreciation of the assets represented in the new investments for FNCER projects. According to current regulations, the annual depreciation rate may not exceed 33%, and, in case of using this accelerated mechanism, the beneficiary shall define an equal depreciation rate for each taxable year (straight line). The incentive applies exclusively to new investments in the stages of pre-investment, investment, and operation of generation projects from FNCER, especially machinery, equipment, and civil works. If the assets object of the investment are disposed of before the end of their depreciation or amortization period, the beneficiaries of the special deduction must return the incentive by incorporating it as net income for recovery of deduction under the terms of Articles 195 and 196 of the Tax Statute, in the taxable year in which the disposal is completed.

- b) **Market obligations:** Law 1955 of 2019 and Resolution MME 40060 of 2019 developed an obligation in the market for the purchase of electricity through FNCER. The commercializing agents of the Wholesale Energy Market will be obliged, as of 2023, to purchase 10% of their energy demand from FNCER.
- c) **Additional incentives of the Energy Transformation Law:**
 - (i) **Amendments are introduced to Law 1715 of 2014 on the declaration of public and social interest** for those projects related to the promotion, stimulation, and incentive to the development of production activities, use, storage, administration, operation, and maintenance of FNCE, mainly those of renewable character. Declaring that these projects are of public and social interest means that they take propriety over other projects in relation to land use planning, urban planning, environmental planning, economic promotion, positive valuation in administrative procedures of competition and selection and forced expropriation.
 - (ii) **Green hydrogen is added as a non-conventional source of renewable energy (FNCER) and blue hydrogen as FNCE.** Green hydrogen is understood to mean that which is produced from non-conventional renewable energy sources, such as biomass, wind energy, geothermal energy, solar energy, tidal energy, and small hydropower. On the other hand, blue hydrogen is produced from fossil fuels, especially by the decomposition of methane, and its production process has a system of carbon capture, use and storage.
 - (iii) **Minenergía, or the entity designated by it, must draw guidelines for the development of geothermal energy in Colombia,** and must create a geothermal registry in which all projects aimed at exploring and exploiting geothermal energy to generate electricity must be registered.
 - (iv) **The National Government will issue the necessary regulations for the promotion and development of carbon capture, use, and storage (“CCUS”, per its acronym in Spanish) technologies.** CCUS is understood as the set of technological processes whose purpose is to reduce carbon emissions in the atmosphere, capturing the CO2 generated at large scales by fixed sources to store it safely and permanently in the subsoil. Based on this definition, the National Government will design policies to promote research and local technology development for the production, storage, conditioning, distribution, re-electrification, energy-related and non-energy-related uses of hydrogen and other low-emission technologies within six months after the entry into force of the law in question.
 - (v) **The policy for the development of electric energy services in the Non-Interconnected Zones (ZNI)** is strengthened through: (i) reliability of the service, (ii) transfer of resources for lower tariffs, (iii) transfer of assets and (iv) hybrid solutions.

4. Various companies (public, private, national and foreign) can participate in the sector

The Wholesale Electricity Market in Colombia is a competitive market in which players who meet the system requirements may participate.

In power generation there are both state and privately owned companies that provide electric energy of different types. State-owned companies include Grupo de Energía de Bogotá – GEB (which participates in the generation market through its shareholding in Emgesa) and Empresas Públicas de Medellín (EPM). In thermal generation, GECELCA, Urrá and Gensa stand out, with the national government as the main shareholder.

Other important players in the sector with private capital, both domestic and foreign, or mixed, include Isagen (with approximately 3,000 MW of capacity, mainly hydro), AES Colombia (1,000 MW), and Enel-Emgesa (3,000 MW hydro and 500 MW thermal), as well as thermal plants such as Termocandelaria, Termotasajero and Termovalle.

The promotion of renewable energies has fostered healthy competition between incumbent companies in the country and the entry of international players. To this end, among other objectives unrelated to the renewables sector, the CREG developed the “takers mechanism”¹³ to encourage the entry of new investors. Owners or representatives of new generation plants are allowed to commit firm energy obligations of the reliability charge (“cargo por confiabilidad”) for any future period in which firm energy obligations have not been allocated. Through this mechanism, interested parties may commit to maintain firm capacity for events in which the exchange price exceeds the scarcity price, for which they are remunerated at a price of 9 USD/MWh, and to dispatch electricity at the exchange price when the exchange price exceeds the scarcity price.

¹³ Resolution CREG 132 of 2019



This regulation is reflected in the auction results. In the auction that took place in November 2019, established companies such as Celsia and AES were awarded contracts, and new international players such as EDPR and Trina participated as well. In the auction that took place in October 2021, established companies such as EPM, Celsia, and Enel Green Power and Urrá were awarded solar projects, as were Canadian Solar Energy Colombia, EDF Energy, Powertis, Genersol and Solarpack Colombia.

Thus, the non-conventional renewable energy market has been consolidating as an open market where players of different sizes, both national and foreign, can participate.

5. Non-conventional renewable energy is here to stay

The impulse to non-conventional renewable energies has no turning back. Colombia has positioned itself as a leader in energy transition in the region. In addition, this transformation contributes to the achievement of its international commitments. At the recent COP26 session, the national government launched Colombia's Long Term Climate Strategy E2050, in which it commits to reduce emissions by 50% by 2030 and to achieve carbon neutrality by 2050.

These commitments are likely to turn into public policies. Climate change issues are of interest to all Colombians, especially to the youngest, for whom energy transition is fundamental. These issues will be

present in the next congressional and presidential elections in 2022. Presidential candidates have expressed interest in continuing the energy transition process with a focus on the introduction of solar, wind and other FNCER. While there are specific approaches that may vary (e.g., around tax incentives, regulation, and prioritization on the agenda), all political parties support the renewable energy agenda, and this will mean continuity for the sector.

Five myths to consider



Myth 1: Paperwork is confusing, time-consuming and difficult to complete

There are at least two major procedures associated with the commissioning of generation projects that several stakeholders sometimes identify as confusing, lengthy and difficult to comply with: the connection procedure and obtaining the environmental license. The following paragraphs point out the apparent difficulties associated with these procedures and explain how the current regulation contains mechanisms that facilitate project development.

a) **Procedures to ensure the connection of generation projects to the National Interconnected System**

The procedure that existed until 2021 for the connection of generation projects, contained in Resolution CREG 106 of 2006, did not provide sufficient incentives for the efficient execution of projects. The absence of incentives caused delays in the entry into operation of projects and generated a saturation of the assigned transmission capacity, which in turn affected the availability of connection points and the expansion of the system and risked the very provision of energy.

These inefficiencies generated difficulties arising from the growing number of connection requests: developers were having trouble getting their projects connected, while the system reserved capacity for projects that potentially would not be connected to the system. To tackle these difficulties, Minenergía established public policy guidelines and the CREG issued Resolution 075 of 2021, which contains, among others, the following improvements to the connection request process and the monitoring of projects with assigned capacity:

- (i) A unified connection request system through a virtual application, which is administered by the UPME.
- (ii) The obligation to provide a guarantee of USD 1 per kW of capacity is substituted by the obligation to provide a guarantee of USD 10 per kW of

capacity, which discourages those with allocated capacity from failing to meet the milestones and commissioning date.

- (iii) A transition regime that releases the transport capacity of projects in the event that their developers do not comply with certain requirements, which guarantees that projects with a greater possibility of entering into operation can obtain transport capacity.
- (iv) Clear rules and deadlines for the allocation of connection capacity to the National Interconnected System.
- (v) Clear rules for the execution of the capacity reserve guarantee, and for the release of allocated capacity, which promote an efficient execution of the milestones of each connection project.

Although the solutions proposed by Resolution CREG 075 of 2021 are in an initial implementation stage, they are expected to reduce existing inefficiencies.

- b) **Environmental licensing:** While it is true that environmental licensing may entail delays, it is also true that there is clarity regarding the entities responsible and the procedures that need to be followed.

The Colombian legal system (Law 99 of 1993 and Decree 1076 of 2015) regulates the environmental licensing process and establishes the duration of each stage. The process has a duration term of ninety (90) working days which, in turn, can be extended in the following circumstances:

- (i) Request for additional information to the interested party or applicant of the environmental license: if the environmental authority considers it necessary, it may request the interested party or applicant, only once, to furnish additional information about the project, work and/or activity subject to environmental

licensing. The environmental authority will have 10 days to summon a hearing with the interested party, to understand and discuss the requests for additional information. There is no established duration for this meeting. The interested party shall have one (1) month, extendable for up to an equivalent term, to submit the additional information required.

- (ii) Supplementary concepts from other environmental authorities, as appropriate: in the event that the environmental licensing process is carried out before the National Environmental Licensing Authority ("ANLA"), the regional environmental authorities, (the Regional Autonomous Corporations -"CAR" and the Autonomous Corporations for Sustainable Development -"CDS"), must submit a concept on the project, work and/or activity subject to environmental licensing within fifteen (15) working days.

It is important to note that most of the environmental authorities take more time than the time stipulated in the law to decide on the granting or denial of an environmental license.

Also note that, prior to submitting the environmental license application, the interested party must prepare an Environmental Impact Assessment ("EIA") for the project, work and activity, which must be submitted with the respective environmental license application. This document requires the applicant to provide a high level of detail. As preparation of the EIA is a complex process, it is advisable to account for at least six (6) months.

Beyond the aspects mentioned above that can cause additional delays in the environmental licensing process, some additional administrative requirements may need to be accounted for in the following situations: (i) when there are ethnic communities in the area of influence of the project; (ii) if there are protected areas in the zone of influence

of the project (this would create the need to confirm the viability of the environmental licensing process if there id the project overlaps with a protected area); and (iii) when there are local communities that are opposed to the project.

Myth 2: The “social license to operate” renewable energy is relatively easy to obtain

The social license to operate (SLO) refers to the acceptance by the community of a particular project, which goes beyond a formal procedure. It is built on relationships of transparency, trust, credibility, and respect. SLO has at least two important characteristics: on the one hand, it is “granted” by the community, and, on the other, it is considered intangible and non-permanent.

FNCER projects, unlike those in other industries such as oil and mining, have fewer environmental and social impacts and SLOs are therefore easier to acquire. Renewable energies are perceived to solve basic needs- such as electricity- and, as

they are “renewable”, contribute to the reduction of greenhouse gas emissions.

However, renewable energy projects have impacts at the local level that must be recognized and addressed together with the community. In the case of photovoltaic solutions, sometimes they require extensions of land that may compete with the agricultural vocation of the territory. As for wind solutions, there are landscape impacts that can affect regions with a tourist vocation. Finally, the entry of large-scale projects can lead to expectations in the communities regarding income and employment generation that are not always compatible with projects of this type, especially in territories where the basic needs of the population are not covered.

It is therefore necessary to discuss and explain the real impact of a project from the outset and to have good relations with the communities based on the SLO principles of transparency, commitment, and genuine dialogue.

Myth 3: Prior consultation with ethnic communities has clear and simple procedures

In accordance with the Colombian legal framework and Convention 169 of the International Labour Organization (ILO) on “Indigenous and Tribal Peoples” (“Convention 169”), ethnically distinct communities have the right to: (i) ownership over their territory; (ii) the use of natural resources in their territories; (iii) the preservation of their traditional knowledge; (iv) self-determination; and to (v) Prior Consultation. Particularly, in Colombia, the presence of: (i) indigenous communities; (ii) Afro-Colombian communities; (iii) Raizales of the Archipelago of San Andrés, Providencia and Santa Catalina; (iv) Palenqueros; and (v) Rom or Gypsies.

Based on the above, if a project, work and/or activity may affect the cosmovision or the social, economic, cultural and/or religious practices of an ethnically differentiated community, the project promoter must carry out a prior consultation. Unlike the SLO, this procedure is a legal



obligation, and failure to perform it could lead to sanctions or to the suspension of the project, work and/or activity by the competent authority.

Although delays in prior consultation processes have been a challenge, both before and during the COVID-19 pandemic, the regulatory framework for prior consultation is now more robust. Presidential Directive No. 10 of 2013, as amended by Presidential Directive No. 8 of 2021, establishes the procedure and the phases involved in the process. In addition, Resolution CREG 075 of 2021, which regulates the connection of generation projects to the grid, contemplates mechanisms to extend the commercial operation date of the projects in case of delays associated to the prior consultation that are not attributable to the investor. To this extent, even when there are difficulties with respect to environmental permits, the regulatory framework provides for mechanisms to mitigate the negative impact of these delays.

It is also true that the complex dynamics associated with the consolidation and recognition of ethnically differentiated groups, together with the phenomena of forced displacement resulting from Colombia's conflict, have meant that in some cases it has been difficult to properly identify the communities subject to prior consultation by the Direction of the National Authority for Prior Consultation of the Ministry of the Interior ("DANCP", per its acronym in Spanish).

To assist with this, Convention 169 and the Colombian Constitutional Court defined two criteria for identifying ethnic communities that enjoy differentiated rights, namely (i) a subjective criterion: members' awareness of their specificity and of their own individuality in relation to other human groups; and (ii) an objective criterion: all the material elements that distinguish a group, such as its institutions and collective behaviour, which includes economic, social and cultural practices. Based on these elements, the DANCP can identify whether or not there is an ethnic community in a

territory and identify whether a project, work and/or activity has a direct impact upon it, and based on that issue a certificate determining if prior consultation is required.

Finally, in the case of consultations, the same principles governing SLO apply and it is important to approach consultations with the communities transparently, genuinely and credibly.

Myth 4: The steps to acquire land and easements are easy and present no reputational risk to the investor

One of the most important assets in non-conventional renewable energy projects, especially photovoltaic projects, is access to land. In Colombia, acquiring land is a relatively straightforward procedure and is subject to private law rules. However, land ownership is linked to the country's historical conflict, and this requires a level of analysis that goes beyond the formal review of the transfer of ownership of real estate.

From a legal perspective, it is necessary to consider the following:

a) **Challenges in regularization of property ownership:** when choosing a property for the development of a generation project, it is necessary to consider the provisions of the Land Restitution Law. This law created a mechanism to facilitate the restitution of land stolen or abandoned in the context of human rights abuses and violations. The law establishes that one of the mechanisms for compensating victims of the armed conflict in Colombia is to give them back the land that they legitimately occupied before being forced to abandon or sell it during the armed conflict in Colombia.

It is also possible to encounter inconsistencies and interruptions in the registration of the chain of tradition, which can lead to judicial debates on the ownership and exploitation rights of the land. For example, it is common to find inscriptions on ongoing possession actions, which do not prevent the negotiation of the exploitation rights of

the property, but they do generate the risk of interruption of the operation in cases where the possession actions are not successful, and the resulting owner of the property opposes the project.

b) **Imposition of easements:** the applicable law provides for a clear and structured procedure for the imposition of easements. Specifically, easements can be imposed by legal and administrative means.

In the case of the imposition of easements by administrative act, these provisions apply to the Nation and to territorial entities when they are competent to provide the public utility (Article 118, Law 142/94).

Regarding the imposition of easements by judicial means, and subject to the negotiation with the landowner, regulated procedures that guarantee due process and the review and objective justification of the need for the easement must be applied.

c) **Urban planning regulation:** Urban planning regulation in Colombia is local, which means that when an energy project is located in the jurisdiction of a municipality, developers shall consider various scenarios of urban planning compatibility of the project. For example, developers must consider that local planning instruments contain a pre-established zoning of land uses, and that it is likely that such zoning does not provide for the operation of energy projects in certain areas, or even that no such use is allowed, which may make it impossible to establish a project in that area. However, in general, planning instruments include mechanisms to overcome these cases of incompatibility of use, and allow adjustments and the possibility for developers to present a case before the municipal authorities and defend the convenience of a project and its public utility and social interest as a FNCER initiative, presenting with it any mitigation measures to address any negative impact that may be identified.

d) **Intervention and occupation of public space:** more than a barrier, this is a necessary procedure for the deployment – especially of transmission lines to connect generation projects. Colombian regulations establish that, whenever it is required to intervene or/ and occupy public space (such as roads and sidewalks), developers shall apply for a license for the intervention and occupation of public space before the urban planning authority of the corresponding municipality, in accordance with the municipal ordinance plan and other instruments that develop and supplement them. The particularity of the scope of the obligations imposed by each license is related to the design of the public space defined by each municipality.

Myth 5: With the peace agreement, security risks have been minimized or are non-existent

The benefits of the 2016 peace agreement signed between the government and the former Revolutionary Armed Forces of Colombia (“FARC”, per its acronym in Spanish) have been reversed over the years. This is a result of the weak and delayed implementation of the agreement, the fragile state presence in rural areas, and the persistence of illicit economies from which Organized Armed Groups (“GAOs”, per its acronym in Spanish), FARC dissidents, and a multiplicity of local criminal groups profit.

Although the country has not regressed to the worst periods of armed conflict and violence of the late 1990s and early 2000s, the deterioration of some security indicators (such as extortion and terrorism, according to Ministry of Defense figures), the increase in actions of social and territorial control by armed or criminal groups (for example, through collective homicides, forced displacement and threats to social leaders), and the lack of an effective security policy, indicate that significant improvements in the security environment are unlikely in the near future.

From a threat perspective, the renewable energy sector faces less exposure - unlike other sectors, such as extractive or tertiary road infrastructure, which sometimes suffer guerrilla or GAO attacks as an offensive, diversionary or retaliatory measure against the security forces. However, the risks for renewable energy projects are latent and require a rigorous assessment of the intention and capacity of criminal actors to threaten the projects. We believe that at least the following aspects should be taken into account:

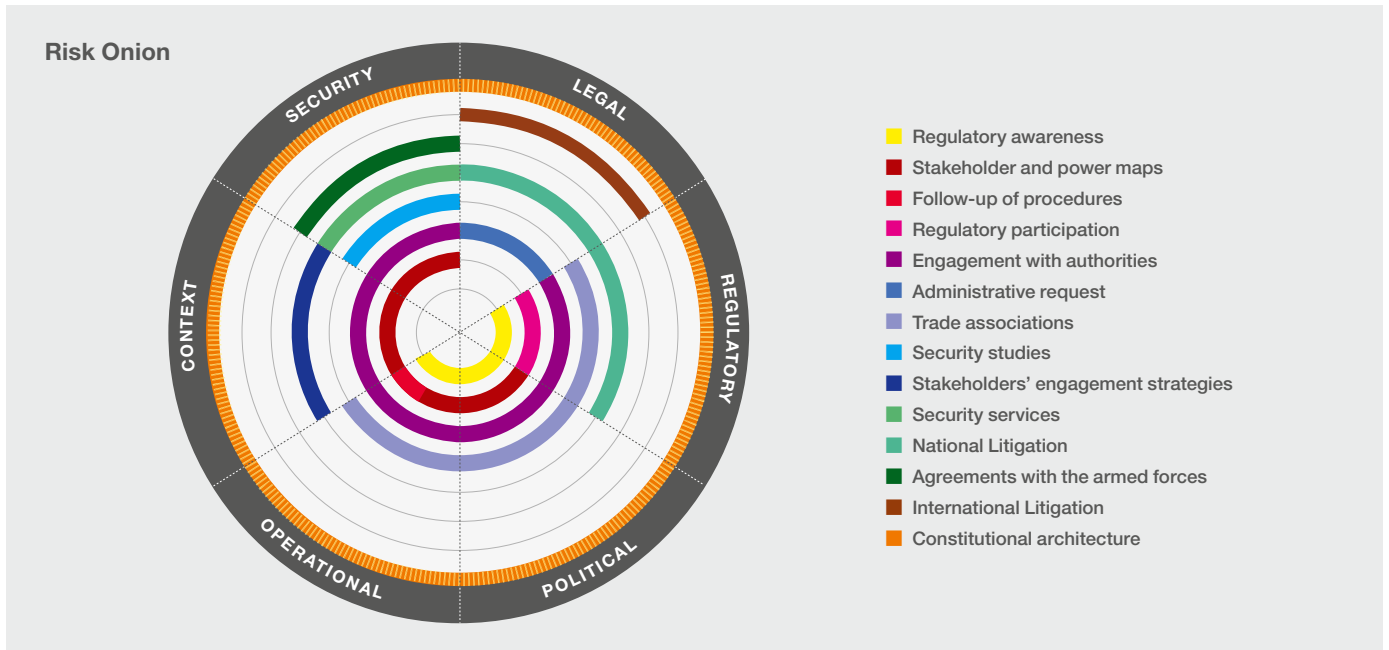
- a) **Local risks and volatile environments:** Following the signing of the peace agreement, local security conditions in some areas of the country are highly volatile. This is due to criminal reorganization leading to disputes over control of territories and illicit economies. Security threats, and exposure to risk, vary significantly from region to region, and from municipality to municipality. Suppliers, contractors, and local partners often face a higher level of threat from GAOs and organized crime groups (particularly extortion), which can expose multinational companies to reputational and legal risks if due diligence and proper management of risks along the supply chain (including human rights risks) is not demonstrated.
- b) **Kidnapping and extortion dynamics:** Although the incidence of kidnapping has declined over much of the last decade, Colombia continues to have a higher kidnapping rate than the world average and many other countries in the Latin American region. In addition, the incidence of kidnapping has increased during 2021 due to a rise in crime because of the economic downturn caused by the pandemic. Kidnappings in Colombia can be perpetrated by criminal groups and gangs, as well as guerrilla groups such as the National Liberation Army (“ELN”, per its acronym in Spanish) and dissident factions of the FARC, in both rural and urban areas. However, their intent and capacity will depend on their level of

territorial control and confidence that they will not be confronted by the state. Even though they are isolated, there are precedents for kidnappings in the renewable energy sector. Extortion also remains a threat in Colombia. Perpetrators of extortion include GAOs and guerrillas, as well as criminals with limited capabilities. There are precedents of cases and attempts of extortion in the energy sector, including multinational companies and their personnel.

- c) **Social protest disruptions:** Renewable energy projects in the department of La Guajira, one of the departments with the highest poverty rates in the country, have faced disruptions because of social protest due to employment and contract demands by local communities. Also, projects that fail to secure social license to operate, particularly the acceptance of indigenous communities, may face possible protests and blockades that could affect the continuity of operations.
- d) **Common crime:** The theft of equipment and materials is a latent risk for renewable energy projects, although few cases have been reported in open sources in the country. Wiring, cables, wires and other items containing high-value materials, such as aluminum or copper, attract opportunistic criminals. These risks are entirely manageable and can be prevented to ensure that projects are operational.

How to manage risk – tiered approach (Risk Onion)





Having exposed key facts and demystified some common misconceptions, the last part of this report identifies a series of strategies to mitigate the identified risks and enable successful operations and investments. The experts at Control Risks and Brigard Urrutia have extensive experience helping investors mitigate legal, regulatory, operational, political, security and environmental risks. Our shared philosophy is that, except in the most extreme cases, all risks can be mitigated if they are identified in advance and if the appropriate resources (financial, human, technical and time) are allocated. To this end, there are multiple levels of risk management which are outlined in this section.

Legal and regulatory risks

1. **Regulatory change:** The first risk arises when any of the entities that regulate the electricity sector (Ministry of Mines and Energy, the Mining and Energy Planning Unit – UPME- the Energy and Gas Regulation Commission - CREG, or the Superintendence of Public Services – SSPD) issues a regulation, or interprets an existing one, and negatively affects the operations or economic conditions in electricity projects.

a) **Risk management mechanisms:**

In the face of this risk, we consider it strategic to carry out at least the following activities:

- (i) **Regulatory awareness:** There are at least two strategies to anticipate potential regulatory changes and/or to monitor draft regulations: (i) follow up on the regulatory agenda of the entities that regulate the sector; and (ii) constantly follow up on draft resolutions in order to react efficiently and timely with the actions described in the following points.
- (ii) **Regulatory participation:** We suggest that interested parties should present comments to drafts of administrative decisions when they believe that these could affect them negatively.
- (iii) **Trade associations:** It is strategic to participate in associations and have greater negotiation and persuasion power acting under a collective body instead of individually.

Associations tend to be more effective interlocutors and are better equipped to achieve regulatory objectives.

(iv) **National litigation:**

If regulators do not respond to collective or individual requests, interested parties may resort to litigation against regulations that negatively affect them. Depending on the objective sought and the damages caused, under Colombian law the main legal actions would be a nullity action, nullity and compensation, or nullity due to unconstitutionality.

2. **Prohibition of private electrical energy projects:** There could also be a risk that a future government may decide to prohibit foreigners or private parties from investing in and developing projects associated with public services. In this regard, we believe that the following steps exist to defend the interests of investors and owners of these projects:

a) **Risk management mechanisms**

(i) **Constitutional framework:**

The current constitutional framework protects national and foreign investors, allowing their participation in projects in the electricity sector, and provides for compensation measures if any such prohibition were to arise.

(ii) **Administrative requests:**

In the case of regulations, interested parties could go directly to the state entity that prohibits or limits the actions of private parties and request the revocation of the regulations or prohibitions, if they are of an administrative nature.

(iii) **National Litigation:**

If the corresponding state entity does not respond to the request for revocation of the norm that prohibits or limits private investments in renewable energy projects, the interested parties could file an action through nullity, nullity and compensation or nullity due to unconstitutionality actions.

(iv) **International Litigation:**

The protection to international investments through the activation of International Investment Agreements (“IIAs”) constitutes an alternative defense for a foreign investor that sees its investment in Colombia undermined, because of a violation of the standards of protection negotiated in the IIAs and which must be subject to protection by the Colombian State. Colombia has ratified eighteen (18) IIAs, which enshrine different standards to protect investments made by foreign investors. Although expropriations are valid when they are the result of an exercise of the State’s regulatory power, they must meet the “legality test”

(i.e., they must be carried out for reasons of public utility, subject to due process, in a non-discriminatory manner and with prompt, adequate and effective compensation, provided that the foreign investor demonstrates its good faith in the investment). If the Colombian State fails to comply with any of the requirements of this test, it is feasible, from the standpoint of international law, to bring an investor-State dispute settlement case under an IIA. This is consistent with the main foreign investment arbitration cases involving this subject matter.

3. Risk: Force majeure

In general, and except for “pay as generated” energy supply contracts, the risk of force majeure falls exclusively on the project sellers / owners.

a) **Risk management mechanism**

(i) **Phase 1: Sign and execute “pay as generated” contracts**

Developers could execute “pay as generated” contracts to ensure that force majeure can be argued as a defense.

(ii) **Phase 2: Secure insurance:**

Investors could seek insurance policies for coverage against force majeure, even under “pay as demanded” or “pay as contracted” contracts.

Operational risks

The successful execution of non-conventional renewable energy projects requires an adequate planning of all the procedures and steps to achieve the dates and commitments established in the projects.

a) **Risk management mechanisms:**

In the face of this risk, we consider it strategic to carry out at least the following activities:

(i) **Regulatory awareness:**

As in the regulatory risk section, strong awareness of the regulations will ensure projects comply with all

requirements. This allows for proper planning and execution.

- (ii) **Follow up of procedures:** Not only is it enough to know the regulations, but it is important to be clear about how long it will take to acquire the information. For example, in the case of environmental licensing, biotic and abiotic diagnostics may require collecting information in two seasons. In the case of prior consultation, the steps and timeframes that communities follow will vary. Clarity on these issues will again assist in efficient planning and execution. Once the procedures have been filed, it is important to follow up on them in a timely manner and be attentive to respond to any additional requirements from the authorities.

Context risks

Renewable energy projects can pose challenges associated with the social license to operate, the relationship with ethnic communities and the proper understanding of the relevant stakeholders in the regions. Navigating these challenges requires strategic management of the environment, focused on building trust to prevent conflicts.

a) **Risk management mechanisms:**

To address this risk we consider it strategic to carry out at least the following activities:

(i) **Stakeholder and power maps:**

Adequate stakeholder mapping around a project makes it possible to identify the expectations, interests and needs of the communities in the area of influence of a project. If the stakeholder mapping identifies the presence of ethnic communities, this mapping should be supplemented with official information issued by the Ministry of the Interior on the registration of communities in order to identify in a timely manner the need to carry out prior consultation processes. Beyond the maps of stakeholders, “power

mapping” should also be carried out to determine who directly or indirectly has economic, political and tactical interests in the project regions Adequate identification of these interests will allow the projects to assess potential impact and react to any adverse effects.

- (ii) **Engagement with authorities:** Engagement with local, regional and national authorities is critical. Sometimes, the challenges of environmental management arise from the dissatisfaction of the communities in the provision of public services. In this sense, it is important to understand the development plans at the various levels (municipal, regional and national) and the impact the project will have on the community. It is also necessary to build relationships of trust with the sector’s energy and environmental regulatory authorities, as well as with the public security forces to manage possible violent conflicts or similar.
- (iii) **Stakeholder engagement strategies:** Once the actors, alliances and authorities have been identified, a relationship strategy must be designed and implemented that adequately identifies their interests and concerns, based on transparency, credibility and the joint construction of projects. Likewise, it is necessary to analyze how corporate social responsibility plans supplement the efforts of allies and authorities.
- (iv) **Additionally, there is the need to establish strategic alliances:** with other private organizations or civil society organizations operating in the region to foster synergies and economies of scale in addressing community challenges.

Political risks

Renewable energy projects often face political challenges that can change the economic, legal and environmental

conditions of a project. Navigating them requires strategic management of stakeholders and appropriate relationships at the trade union level and with the authorities.

- a) **Risk management mechanisms:** Among others, the following activities may help to address these risks:
 - (i) **Regulatory awareness:** In-depth understanding of the regulation and the variables that could pose Political Risks is essential. For example, regulatory changes that affect the price of energy for consumers, or level of reliability in its supply, will always be issues that form part of the political agenda.
 - (ii) **Stakeholder and power maps:** As in environmental management, the mapping of “power” around a project is essential to its success. Understanding who evidently or non-evidently influences political issues around a region helps to mitigate the political risks of operations. This political mapping should be done at the local, regional and national levels.
 - (iii) **Engagement with authorities:** While it is strategic to have good relations at the trade union level, it is also strategic to have good relations with all local, regional and national authorities that have a bearing on the sector. Good relationships at these levels also allows investors to showcase the benefits of projects and their contribution to the country’s development, and facilitates solving difficulties and obstacles when these arise.
 - (iv) **Trade associations:** Trade associations play a key role in permanently monitoring the evolution of issues at the political level, both in the executive and in the legislative, so it is useful to have this type of representation.

Security risks

- a) **Risk management mechanisms:** In the face of this risk, we consider

it strategic to carry out at least the following activities:

- (i) **Stakeholder and power maps:** Stakeholder and mapping the “power” surrounding a renewable energy project is the first step to address the security risks of a project.
- (ii) **Engagement with authorities:** Establishing strong relationships with authorities contributes to generating relevant information and managing security risks.
- (iii) **Security studies:** The security study identifies the relevant actors in a territory and their possible security effects on non-conventional renewable energy projects. It also identifies mechanisms to mitigate such risks and vulnerabilities.
- (iv) **Security services:** Based on the security study, appropriate professional services can be contracted to mitigate the security risks of the project.
- (v) **Agreements with the armed forces:** In areas of special interest or vulnerability, it may be useful to negotiate agreements with the security forces to guarantee the conditions for project implementation.

From our perspective, there is a great opportunity in the country for investment in the renewable energy sector and an institutional and regulatory framework that allows taking advantage of this potential. However, these investments require a robust strategy in the identification and management of risks in different areas. As we have pointed out in this analysis, some regulatory, political, social and security aspects are sometimes overestimated, and at other times they are unknown or underestimated. The considerations we have presented above are intended to guide the task of assessing and weighing risks appropriately to help investors develop successful projects.

About the authors

Control Risks

Control Risks is a global specialist risk consultancy. We are committed to helping our clients build organizations that are secure, compliant and resilient in an age of ever-changing risk and connectivity.

Control Risks has operated in Colombia since the company was founded in 1975, allowing for decades-long development of unique in-depth source and alumni networks stretching across the country, sectors and major companies.

The team has an extensive on-the-ground track record supporting national and international clients in navigating the shifting political, security and social risks related to operating in Colombia and across the Andean region. The majority of our work is focused on large-scale investments in energy, extractives, agriculture and infrastructure, and our expertise ranges across security and crisis consulting, political risk analysis, and complex business intelligence and due diligence investigations.

Brigard Urrutia

Founded in 1934 and with more than 85 years of experience, we are recognized as the leading law firm in Colombia and one of the most prestigious in the region.

We provide legal advice and support in all areas of business law. We represent our clients in a wide variety of matters, including transactional advice, non-transactional advice, litigation and conflict resolution.

Our professionals have graduated from the top universities in Colombia and most of them have post-graduate studies and masters in US or European law schools. Additionally, we have an extensive record as a supplier of first-rate legal services to a global clientele formed by industrial, commercial and service companies, banks and other financial institutions, private equity funds, insurance companies, as well as national and foreign government agencies and companies.

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