THE ENERGY REGULATION AND MARKETS REVIEW

EIGHTH EDITION

Editor
David L Schwartz

THE LAWREVIEWS

THE ENERGY REGULATION AND MARKETS REVIEW

EIGHTH EDITION

Reproduced with permission from Law Business Research Ltd
This article was first published in July 2019
For further information please contact Nick.Barette@thelawreviews.co.uk

Editor
David L Schwartz

THE LAWREVIEWS

PUBLISHER
Tom Barnes

SENIOR BUSINESS DEVELOPMENT MANAGER
Nick Barette

BUSINESS DEVELOPMENT MANAGER
Joel Woods

SENIOR ACCOUNT MANAGERS
Pere Aspinall, Jack Bagnall

ACCOUNT MANAGERS
Olivia Budd, Katie Hodgetts, Reece Whelan

PRODUCT MARKETING EXECUTIVE
Rebecca Mogridge

RESEARCH LEAD
Kieran Hansen

EDITORIAL COORDINATORS
Gavin Jordan, Tommy Lawson

HEAD OF PRODUCTION
Adam Myers

PRODUCTION EDITOR
Anna Andreoli

SUBEDITOR
Gina Mete

CHIEF EXECUTIVE OFFICER
Paul Howarth

Published in the United Kingdom
by Law Business Research Ltd, London
87 Lancaster Road, London, W11 1QQ, UK

www.TheLawReviews.co.uk

ISBN 978-1-83862-032-5

Printed in Great Britain by
Encompass Print Solutions, Derbyshire
Tel: 0844 2480 112

© 2019 Law Business Research Ltd

ACKNOWLEDGEMENTS

The publisher acknowledges and thanks the following for their assistance throughout the preparation of this book:

ABOU JAOUDE & ASSOCIATES LAW FIRM

AFRIDI & ANGELL

ALFARO FERRER & RAMÍREZ

ANDERSON MŌRI & TOMOTSUNE

BAKER MCKENZIE

BRUUN & HJEJLE

CMS

COVINGTON & BURLING (PTY) LTD

DAVID E PETTIT

DLA PIPER INTERNATIONAL

DUANE MORRIS & SELVAM LLP

G ELIAS & CO

HERBERT SMITH FREEHILLS LLP

HFW

HOLLAND & KNIGHT

HVG LAW LLP

LATHAM & WATKINS

LINKLATERS LLP

PINHEIRO NETO ADVOGADOS

SQUIRE PATTON BOGGS

STEPHENSON HARWOOD MIDDLE EAST LLP

STIBBE

STUDIO LEGALE VILLATA, DEGLI ESPOSTI E ASSOCIATI

TRILEGAL

YOON & YANG LLC

CONTENTS

PREFACE

In our eighth year of writing and publishing *The Energy Regulation and Markets Review*, we have seen geopolitical changes that have added significant uncertainties to global energy policies. For example, the uncertainties revolving around the United Kingdom's exit from the European Union (a process known as Brexit) have led to uncertainties regarding the UK's energy policies, including with respect to its commitments to reduce greenhouse gases (GHG). The US withdrawal from the multiparty international agreement with Iran this past year and the re-imposition of sanctions have had significant adverse energy investment impacts on Iran and other countries in the region. Despite the withdrawal of the United States from the Paris Agreement and expressions of support from the Trump administration for the coal industry, the United States has continued its extensive investment in renewable generation resources. The 2011 Fukushima nuclear incident continues to impact energy policy in many countries. Finally, we continue to see liberalisation of the energy sector globally.

I CLIMATE CHANGE DEVELOPMENTS

With respect to climate change developments, despite the US withdrawal from the Paris Agreement, we continue to see significant carbon reduction efforts globally, including increases in renewable resources, as well as energy efficiency and demand reduction measures.

In the United States, the Trump administration had pushed for a grid resiliency plan that the Department of Energy (DOE) issued in draft form that, if adopted, would have provided a benefit to the US coal industry, but the Federal Energy Regulatory Commission (FERC) voted unanimously to reject such a plan. A record number of coal and other aged fossil fuel plants retired this past year. Additionally, many states in the United States have pushed for the procurement of thousands of megawatts of renewable resources, including new offshore wind competitive procurements in the north-east. Furthermore, private companies have led the charge to contract for the long-term purchase of renewable energy.

Despite the United Kingdom's continued efforts to follow through on Brexit, this was a record year for renewable generation development and a record low for energy produced by fossil fuel generation. As a result, the United Kingdom experienced a 43 per cent reduction in carbon emissions since 1990. In France, President Macron announced a goal to close the remaining four coal plants by 2022, and France targeted a 40 per cent reduction of GHG by 2030. Italy is seeking to achieve 30 per cent reliance on renewable energy and a 33 per cent reduction of GHG by 2030. Belgium continued its offshore wind procurement efforts, and is seeking to reduce subsidies in future procurements. Denmark is seeking to have all of its energy demand met by renewables by 2050, with 55 per cent reliance upon renewables by 2030. Switzerland is working to increase its reliance upon hydroelectric and other renewable

resources, and to reduce energy consumption by 16 per cent by 2020 and 43 per cent by 2035, compared to 2000 figures. Germany admitted that it would not meet its goal of reducing emissions by 40 per cent by 2020, as well as its goal to reduce energy consumption by 20 per cent since 2008, but it remains focused on renewable generation development, energy efficiency and conservation and energy storage technologies.

Japan continued its efforts to develop solar and wind resources, including opening new sea areas for offshore wind. But the shutdown of most of its nuclear generation has resulted in a significant reliance upon natural gas, including LNG. China set ambitious renewable energy goals, capping energy from coal generation to 5 billion tonnes and aiming to have 15 per cent of generation supplied by non-fossil fuel generation by 2020. Korea planned to abolish its old coal generation facilities by 2022, and committed to cut GHG by 37 per cent by 2030.

Australia began to focus heavily upon energy storage (battery and pumped water) and South Africa increased its renewable independent power procurement efforts.

II INFRASTRUCTURE DEVELOPMENT

For many countries, a reliable energy supply remains the primary concern, regardless of fuel source. As only 35 per cent of Myanmar is connected to the grid, Myanmar continues efforts to electrify remote parts of the country. Iraq continues to have significant infrastructure needs, and Panama and Colombia continue to seek foreign investment. Foreign investment in Iran will be significantly more challenging following the re-imposition of US sanctions.

South Africa is utilising its Integrated Resource Planning process to attract and develop new generation and transmission capacity. Australia is developing one of the largest pumped hydroelectric storage projects globally. Colombia is developing a large hydroelectric project that is expected to produce up to 17 per cent of the country's energy needs, but that effort is hindered by construction delays.

Denmark has five new applications for oil and gas exploration in the North Sea. In the United States, the DOE has issued a study authorising LNG exports to non-FTA nations, finding that the United States will experience net economic benefits from LNG exports, but efforts to develop oil and gas pipelines have been met with increased challenges from environmental groups.

III NUCLEAR POWER GENERATION

Eight years after the Fukushima disaster, Japan has stopped operations for 39 out of its 48 nuclear power stations, and 12 nuclear power stations are in the process of being reviewed for restart under Japan's new stringent safety standards. Germany continues efforts to phase out all nuclear generation, and Belgium's nuclear plants have been offline for maintenance for technical issues for the past few years. France was seeking to eliminate nuclear generation by 2025, but it extended that date to 2035. Korea continued its efforts to phase out nuclear power, abandoning the construction of six new nuclear plants and cancelling the life extension of 10 older nuclear plants. Switzerland shut down one of its remaining nuclear plants.

But the phase-out of nuclear energy is not universal. The United Arab Emirates' new Barakh nuclear power station is 90 per cent complete, and South Africa is still considering building nuclear capacity after 2030. In the United States, even though the early retirement of certain nuclear plants has been driven by cost and power market considerations (rather

than safety concerns), some states have passed legislation to subsidise nuclear energy to allow owners to continue to operate through zero emissions credit programmes, including Illinois, New York and New Jersey, with similar legislation being considered in Pennsylvania and Ohio. While some parties challenged the constitutionality of these zero emissions programmes, two federal courts of appeals have upheld these programmes, and the US Supreme Court denied requests to review those decisions.

IV LIBERALISATION OF THE ENERGY SECTOR

We have seen significant energy sector regulatory reforms in many countries. The European Union has sought to continue efforts to centralise the regulation of the EU energy sector. France has taken significant steps toward further liberalisation of its energy sector, as has Switzerland. Japan fully liberalised its electricity sector, will be implementing unbundling next year, and is liberalising its retail natural gas and petroleum industries to encourage market entry. Australia has opened access to transmission through regulatory reforms to encourage entry into the generation market and has implemented significant market pricing response in response to the increase of renewables. Brazil is implementing net metering regulations this year and is implementing limited retail competition for large load. But the United Kingdom took a step backwards by implementing default price caps rather than market-oriented changes. In the United States, state subsidies for nuclear and renewable generation continue to threaten the effectiveness of capacity market regional pricing.

I would like to thank all the authors for their thoughtful consideration of the myriad interesting, yet challenging, issues that they have identified in their chapters in this eighth edition of *The Energy Regulation and Markets Review*.

David L Schwartz
Latham & Watkins LLP
Washington, DC
May 2019

Chapter 6

COLOMBIA

José Vicente Zapata and Daniel Fajardo Villada[1]

I OVERVIEW

In past decades, the energy sector in Colombia has been one of the main pillars of development and growth of the country's economy while contributing significantly to the national budget, which is devoted to infrastructure and social development, as result of the collection of royalties, taxes and dividends.

Although nowadays the country is a target for international investment, having extensive trade relations and an attractive business environment,[2] it is undeniable that there is currently an environment of uncertainty in Colombia, which has had adverse effects on international investment and on the country's credit rating. Nevertheless, some elements should be highlighted as providing a positive boost for the economy and investment: the ongoing implementation of the peace process with the Armed Revolutionary Forces of Colombia (FARC) ending an armed conflict of over 50 years[3] and the election of the young right-wing former senator Ivan Duque as President of the Republic, who has actively promoted boosting investment as one of the government's goals. However, one of the positive aspects discussed in last year's chapter was the reactivation of the peace talks between the National Liberation Army (ELN) and the government, peace talks that were recently ended due to the ELN's persistence in carrying out terrorist acts, including attacks on power lines and stations.

As result of the terms of the Colombian Constitution of 1991, the Colombian electricity sector has been transformed from a sector wholly owned by the government into a sector where there is a clear separation between the roles of service providers and utility companies, and regulators, policymakers and control and oversight agencies. Since then, this sector has existed on three main levels. First the Ministry of Mines and Energy (MME), which governs policy and establishes the long-term plans for the whole sector. Second, the Energy and Gas Regulation Commission (CREG), which sets out the rules and roles of each of the participating agents, while also focusing on quality and price for the end user. And third, the Superintendence of Domiciliary Public Utilities (SSPD), which is an inspection, monitoring and surveillance body that oversees operators and guarantees supply to the end user.

The main power source used in Colombia is hydropower, which represents 77.97 per cent of the installed capacity, followed by thermal power stations operating with coal and

1 José Vicente Zapata is a partner and Daniel Fajardo Villada is an associate at Holland & Knight.

2 Colombia's official investment portal – PROCOLOMBIA, 'Why invest in Colombia?' Available at: www.investincolombia.com.co/why-colombia.html#attractive-business-environment, accessed on 18 March 2018.

3 PricewaterhouseCoopers, Doing Business in Colombia 2018, available at: www.pwc.com/co/es/publicaciones/doing-business/doing_business_2018.pdf, accessed on 15 March 2018.

gas with a share of 14.62 per cent. The remaining energy is obtained and supported by other sources such as cogeneration, with a share of 1.22 per cent, and wind power, which adds 0.1 per cent.[4]

In terms of connectivity, the Colombian electricity sector is divided into the National Interconnected System (SIN), which comprises generation plants, the interconnection network, and regional and interregional transmission and distribution networks; and the non-interconnected zones, where electricity services are not provided by the national network but by independent small-scale systems.

II REGULATION

i Regulators

The Colombian Constitution, issued in 1991, conferred legislative power on Congress and granted regulatory power to the national government, which in turn exercises such power through the regulatory entities that serve the energy sector via decrees and resolutions.

Specifically, the determination of policies and issuance of regulation is undertaken by several government entities, as follows.

On the one hand, the MME is the government entity responsible for formulating, adopting, directing and coordinating the policies, plans and programmes of the mining and energy sector in Colombia as well as the supervision of the electricity sector. The MME regulates generation, interconnection, transmission and distribution activities and is in charge of generation and transmission programmes.

On the other hand, the administration and issuance of regulations in the electricity sector is dealt with by the following technical entities:

a CREG, a special administrative body created in 1994, is responsible of the regulation and promotion of competition between the entities involved in the electricity sector and the regulation of electricity and gas utilities. Pursuant to Laws 142 and 143 of 1994, the following specific functions are assigned to CREG:
- promoting fair market competition;
- setting out the conditions for deregulation of the electricity sector regarding a competitive market;
- determining and approving interconnection and usage charges and tariffs for the transmission and distribution of electricity;
- defining the regulated and unregulated end-user markets;
- setting out the regulations for the operation, planning and coordination of the national transmission system; and
- issuing the technical regulations with respect to quality, reliability and security of electricity;

b the UPME is a special administrative unit attached to the MME in charge of planning the energy mining sector in coordination with other agents in the sector and supporting the MME in achieving its goals and objectives;

4 Colombian Mining and Energy Planning Unit (UPME), 'Monthly Report on Generation Variables and the Colombian Electricity Market – August 2018'. Available at http://www.siel.gov.co/portals/0/generacion/2018/Informe_de_variables_Ago_2018.pdf. Accessed on 18 March 2019.

c the Institute for Planning and Promotion of Energy Solutions for Non-Interconnected Areas is responsible for the promotion, development and implementation of energy efficient, viable and sustainable solutions that meet the needs of non-interconnected zones; and

d the SSPD is a government agency that oversees public utilities companies that operate within the Colombian territory. Among other functions, the SSPD conducts:
- supervising the quality and efficiency of all public service companies;
- taking over public utilities companies when the companies are financially non-viable or when the service rendered is at risk; and
- imposing sanctions on the companies subject to surveillance, and in particular with respect to electricity companies as result of a violation of the code of operations of the electricity sector.

In addition to the above-mentioned entities, the following entities provide consultation and technical assistance in the electricity sector:

a The National Operation Council, responsible for determining the technical standards for the efficient operation and integration of the SIN; and

b the Commercialisation Advisory Board, created by CREG as an advisory entity for the monitoring and review of the commercial aspects of the wholesale energy market (MEM).

The Superintendence of Industry and Commerce (SIC) is the authority in charge of investigating and sanctioning commercial restrictive practices, as well as authorising the mergers of companies operating within a single sector and market.

ii Regulated activities

Environmental permits

From an environmental perspective, the development of works and activities related to electricity or nuclear energy requires a prior licence or environmental permit to be granted by the National Environmental Licensing Authority (ANLA) or regional entities, depending on the sector, type of project and area where it is developed.

Furthermore, the main regulation in relation to environmental authorisations is Decree 1076 of 2015, which, among other things, defines the environmental authority in charge of granting the environmental licence, depending on the type of project and the installed capacity (MW) of the specific project.[5]

Pursuant to Decree 1076 of 2015, an environmental licence is the authorisation granted by the competent environmental authority for the execution of a project, work or activity, which can cause serious deterioration of natural resources or the environment or introduce significant modifications to the landscape. Environmental licences include all permits, authorisations and concessions for the use of renewable natural resources throughout the duration of the project, work or activity, and any requisites for the initiation of the work, project or activity subject to an environmental licence.

5 Article 2.2.2.3.2.1, Decree No. 1076 of 2015.

Pursuant to the ILO Convention 169 and Colombian regulations, should ethnic communities be located within the area of influence of the project, a prior consultation process with such communities must be undertaken prior to the issuance of the environmental licence. Prior consultation suspends the proceeding with respect to the environmental licence.

Electricity: regulated activities

It is of utmost importance to note that, pursuant to the Colombian Constitution, electricity generation, interconnection, transmission and commercialisation activities are considered public utilities to be provided under Colombia's authority and supervision and governed by the constitutional principles of free economic activity, free private initiative, free competition and private ownership.

The primary electricity regulation is contained in Laws 142 and 143 of 1994, which were enacted in a context of severe energy insufficiency and outages. Until 1995, electricity services were provided by the state through the company Interconexión Eléctrica SA (ISA) and other government-owned entities, with minor participation of the private sector. The power sector was reformed to introduce market economy principles, assigning the state the role of regulator. ISA was spun off into two companies: ISA the transmission company with system and market operating functions, and ISAGEN, a new company for electricity generation.

Law 142 regulates all aspects related to energy as a public service, and Law 143 sets out the legal regime applicable to the generation, interconnection, transmission, distribution and commercialisation as well as the Wholesale Electricity Market, which came into operation in July 1995. Furthermore, Law 143 of 1994 states that all the activities that involve the supply chain of electricity, from generation to commercialisation, are intended to satisfy primary collective needs on a permanent basis and thus considered as mandatory public utilities, essential in nature.

In relation to projects, free private initiative is the general rule and thus, private and public–private partnerships may get involved in the generation, transmission, distribution and commercialisation of electricity without requiring a concession. In other words, this means that Colombia will only get involved in the development of electricity generation projects when no private entity is willing to assume such activity.[6]

iii Ownership and market access restrictions

In Colombia, there are no limitations or prohibitions for foreign participation or investment in the electricity sector. The only sectors in which foreign investment is prohibited are national security and defence and processing and disposal of toxic, hazardous or radioactive waste, as specified by Article 6 of Decree 2080 of 2000, further amended by Decree 2466 of 2007.[7]

Nevertheless, pursuant to Article 471 of the Code of Commerce, foreign companies willing to undertake permanent business in the country are required to constitute a branch with local address in Colombia. Moreover, according to Law 142 of 1994, enterprises providing public utilities, such as companies participating in the electricity sector, must be constituted as public utilities companies.

6 See Article 56 of Law 143 of 1994.

7 Compiled in Article 2.17.2.2.3.1 of Decree 1068 of 2015.

Regarding the electricity sector, as of the issuance of Laws 142 and 143 of 1994, generation, transmission, distribution and commercialisation of energy are considered as isolated activities. Furthermore, Article 74 of Law 143 of 1994 expressly prohibits companies involved in the electricity sector to engage in more than one activity except for commercialisation, which can be developed along with other activities of the electricity sector.

In addition, CREG regulations have set out specific restrictions as follows:

a electricity generators are not allowed to have an equity participation of more than 25 per cent in distribution companies;

b no company can have market participation above 25 per cent in the generation activity;[8] and

c no company is allowed to directly or indirectly own more than 25 per cent of the equity of a company involved in commercialisation of electricity.[9]

iv Transfers of control and assignments

With respect to mergers and acquisitions, it is important to note that all companies involved in the electricity sector are subject to the general competition and antitrust regime provided for in Law 1340 of 2009.

Pursuant to Article 9 of Law 1340 of 2009 and Resolution 10930 of 2015 issued by the SIC, certain mergers, consolidations or integrations require either to be approved or to be notified to the SIC.

Mergers require notice to the SIC when they meet the following conditions:

a whenever the transaction creates any form of integration. Any transaction to acquire 'control' over assets or shares of other companies leading to the creation or reinforcement of market power constitutes a merger;

b the parties of the transaction in Colombia jointly or individually have, in the year prior to the transaction, a level of total assets or operational income equal to or above 60,000 minimum monthly Colombian legal wages;

c whenever the companies involved in the transaction are dedicated to the same activity or participate in the same vertical value chain; and

d whenever at the time of notice companies have:
- 20 per cent or less market participation; or
- 20 per cent or less participation in the same vertical value chain.

Notice must be submitted as a pre-completion requirement of the transaction. However, this filing does not constitute a merger clearance by any means. Mergers will require approval of the SIC when they meet the first three above-mentioned conditions and the market participation of the companies individually or jointly equals or exceeds 20 per cent of the relevant market under Colombian jurisdiction.

Approval must be submitted as a pre-completion requirement of the transaction; the SIC's clearance is therefore a mandatory condition in order to proceed with completion of the transaction.

In addition to the above, Article 34 of Law 142 of 1994 mandates that companies involved in public utilities must avoid unjustified privileges and discriminatory acts and must refrain from undertaking any act or transaction that has the capacity, purpose or effect of

8 See CREG Resolution 60 of 2007.

9 See CREG Resolution 128 of 1996 and Resolution 24 of 2009.

generating unfair trade, restricting competition or abuse of dominant position. The SSPD is the entity in charge of monitoring compliance of the aforementioned obligation and imposing sanctions.

III TRANSMISSION/TRANSPORTATION AND DISTRIBUTION SERVICES

i Vertical integration and unbundling

As indicated above, the electricity Law 143 of 1994 and CREG regulation establish unbundling rules restricting horizontal and vertical integration of utility companies that provide electricity services. Integration rules indicate the following:

a utility companies incorporated before Laws 142 and 143 of 1994 can develop more than one activity under separate accounts for each business; and

b utility companies constituted after the enactment of Laws 142 and 143 of 1994 can only undertake, at the same time, complementary activities such as generation-retailing or distribution retailing and are prohibited to simultaneously perform activities of generation transmission, generation-distribution, transmission-distribution and transmission-retailing.

With respect to horizontal integrations, as it was previously stated, pursuant to Resolution 128 of 1996 of the CREG, a single company may not own more than 25 per cent of country's generation, retailing and distribution activities.

ii Transmission/transportation and distribution access

The electric power system consists of an interconnected grid – the SIN – that supplies about 95 per cent of the overall demand. The remaining demand (non-interconnected zones) is typically supplied by local small electricity generation plants that operate on fossil fuels (gasoline and diesel).

The SIN has a total length of 26,333.49[10] kilometres comprising the following:

a the SIN;

b the regional transmission system; and

c the local distribution system.

The National Transmission System is a multi-owner network that has the unique characteristics of a natural monopoly, with ISA holding the largest share.

The grid system supply, provided by the National Transmission System, enables the coordination of the generators while reducing the amount of backup generating capacity and reserves. Pursuant to applicable regulations, transmission is defined as the transportation of electricity at a tension level equal to or greater than 220kV. Networks operating at less than 220kV are part of the distribution activity, the main function of which is to transport the electric energy to the end user. Moreover, the electric distribution system is integrated by networks, substations that operate at voltages lower than 220kV and do not belong to the National Transmission System.

10 XM, 'Líneas de trasmisión por agentes operadores', available at: http://paratec.xm.com.co/paratec/SitePages/transmision.aspx?q=lineas, accessed 18 March 2019.

With respect to third-party participation, it is important to note that the National Transmission System operates on an open market basis, and thus transmission operators must provide open access to customers on a non-discriminatory basis, while receiving regulated revenues using transmission system charges. These charges are regulated by CREG, paid by electricity consumers and further collected by retailers.

In addition to the above, Colombia is interconnected with both Ecuador and Venezuela, which has fostered the development of energy security standards while allowing these electricity markets to operate in a coordinated manner.

iii Rates

Pursuant to Article 23 of Law 143 of 1994, CREG:

> *c) Defines the methodology for the calculation of rates for access and use of electric grids as well as the rates for services related to connection and coordination which are carried out by regional dispatch centres and the national dispatch centre.*
>
> *d) Approves the rates to be paid in relation to access and use of electric grids as well as the rates for services related to connection and coordination which are carried out by regional dispatch centres and the national dispatch centre.*

Further, Article 88, numeral 1 of Law 142 of 1994 provides that:

> *Companies should adhere to the formulas that CREG periodically defines to fix their rates, except in the exceptional cases listed below. According to cost studies, the regulatory commission may establish maximum and minimum tariff caps which are mandatory for companies; while it may also define methodologies for determining rates and whether it is appropriate to apply the regime of regulated or supervised rates.*

In relation to the regime of regulated and supervised rates, Article 11 of Law 143 of 1994 establishes a regulated liberty regime according to which rates for generation, interconnection, transmission, distribution and commercialisation of electricity within the national territory is set and limited by the criteria and methodology of CREG.

While each company negotiates its own rate, as mentioned above, rates are capped at the maximum rate established by CREG. For affixing rates to be charged for utilities, CREG establishes the methodology and procedure for the calculation of the rate including costs associated to such rate. Thus, resolutions that set rates include the costs assumed by the provider of such service as well as the methodology used for regulating such cost.

Furthermore, Article 87 No. 9 of Law 142 of 1994 provides that the rates and formulas to calculate such rates fixed by the CREG may be modified by the CREG every five years and when the law so provides. However, Article 126 of Law 142 of 1994 indicates that the formulas to calculate the rates will be valid for five years, unless otherwise agreed between the CREG and the utility companies. The current rates are those set by way of Resolution 097 of 2008 issued by CREG. While it is evident that such Resolution 097 of 2008 was issued more than five years ago, it should be noted that a modification and adjustment proposal has already been drafted and has not yet been approved.

iv Security and technology restrictions

The main concern in terms of security of the electricity sector in Colombia is related to physical security of the oil and energy infrastructure. For several decades, infrastructure was a common target for guerrilla groups related to the armed conflict within the country. Attacks to pipelines as well as energy towers were frequent; they implied serious damages, paralysis of some parts of the system and impacted production levels gravely, affecting vulnerable populations. A decrease and eventual halt in attacks to oil and energy infrastructure is expected as a result of the implementation of the peace process with FARC, and as a result of ongoing negotiations with the National Liberation Army.

While recent developments in terms of peace have substantially diminished attacks to oil platforms, pipelines and energy towers, in 2014, before the negotiation and subsequent implementation of the peace process with FARC, the Colombian government created a task force for the protection of infrastructure including pipelines, energy towers, oil platforms and infrastructure in general, which was named COPEI. Among the various outcomes of the implementation of such task force were the creation of a special operation centre and the distribution of a daily report including possible threats and events.

IV ENERGY MARKETS

i Development of energy markets

The Colombian energy market is based on a competitive market model that is accessible through the MEM. The MEM is a market in which generators, transmitters and wholesale energy consumers and unregulated users participate with the main purpose of trading energy blocks through the SIN.

The MEM is divided into long-term and short-term transactions, depending on the needs of those participating in the MEM and the terms for such negotiations. For example, long-term participants opt for bilateral agreements while short term agreements usually refer to next-day purchases between all the generators of the market, which are subject to explicit regulations. These kinds of transactions usually cover the spot market.

Oversight of the MEM is led by the SSPD, which created the Oversight Committee of the MEM in 2006.

A substantial amount of electricity that is generated in Colombia is traded through the MEM via wholesale transactions, as all the generation companies are obliged to participate in the MEM with all of their generation plants and units that are connected to the SIN.

Retail companies that sell directly to end users are also required to carry out their electricity transactions through the MEM.

ii Contracts for sale of energy

As explained above, the MEM is divided into long-term and short-term transactions. While long-term transactions usually involve bilateral agreements, short-term transactions (referred to as 'on spot transactions') usually involve negotiations of daily price offers along with hourly availability. The prices at which electricity is offered reflect the variable costs of generation as well as opportunity costs.

Firm energy obligation auctions

Allocation of firm energy obligations (OEFs) between the different generators and investors is effectuated through dynamic auctions. OEFs are the resulting links from the auctions, according to which generators must generate a daily amount of electricity, as long as the obligation is in force. When the stock market price exceeds the price of shortage, the OEF price is determined by descending clock auctions.[11] The purpose of such auctions is to allocate firm energy obligations (between the generators and investors), thus ensuring reliability in long-term firm energy supply at efficient prices.[12] Auctions are held three years prior to the date when the firm energy is required. The time between the announcement of the auction date and the end of the obligation term consists of three stages: (1) the pre-qualifying period; (2) the planning period; and (3) the obligation effectiveness period, the total of which varies from one to 20 years.[13]

Bilateral contracts

The bilateral contracts market is primarily a financial market, as its function is to reduce exposure of the generator and end user to short-term price volatility. Such contracts are freely agreed commitments acquired by generators and commercialisation companies to sell and buy electricity. Energy is delivered though the spot market by the generator indicated in the contract, or by another generator as determined by the ideal dispatch (see below). The only requirement in such agreements is that the contract specifies the amount of energy that will be used on an hourly basis. Aside from that requirement, there are no restrictions on the electricity that a generator or commercialisation company may specify in the contracts, or the time frame covered by such agreements. Energy purchases made through such contracts, intended for regulated users, are governed by rules that guarantee competition among generators, while the prices and conditions on such contracts intended for non-regulated users are freely negotiated and agreed by the parties.[14]

Spot market

In the spot market the transmission network is neutral, thus implying that the generator makes its price offer for each day and its availability declaration for each hour, without considering the state of the transmission network. The resources that will be dispatched in order to comply with the hour-by-hour demand are selected according to the most economic offers. This dispatch is known as the ideal dispatch, as it diverges from the real dispatch, which considers the restrictions that may affect the transmission network. The ideal dispatch is determined once finalised by the National Dispatch Centre. It considers real demand and availability, not considering physical and technical restrictions imposed by the transmission network. Price offers presented by the generators must reflect the variable costs of generation and opportunity costs. The spot price is the price of the last resource used to meet the total

11 Article 2, CREG Resolution 071/2006.

12 CREG, 'Características generales del Mercado Mayorista: Transacciones en el MEM: Subasta de OEF'. Available at: www.creg.gov.co/cxc/secciones/mercado_mayorista/subasta.htm, accessed 5 May 2017.

13 CREG, 'Subasta para la asignación de OEF: Generalidades y etapas de la subasta'. Available at: www.creg.gov.co/cxc/secciones/subasta_asignacion/generalidades.htm#notas, accessed 5 May 2017.

14 CREG, 'Características generales del Mercado Mayorista: Transacciones en el MEM: Contratos bilaterales'. Available at: www.creg.gov.co/cxc/secciones/mercado_mayorista/contratos.htm, accessed 5 May 2017.

energy demand every hour, which establishes the price at which all submarginal resources in the same hour will be remunerated. The part of the energy demand from commercialisation companies not covered by bilateral contracts must be paid at this spot price.[15]

V RENEWABLE ENERGY AND CONSERVATION

i Development of renewable energy

Most of the developments in terms of renewable energy have been a result of the issuance of Law 1715 of 2014, which aims, *inter alia*, to promote the development and use of unconventional sources of energy, mainly renewable energy, in the national energy system, as a means to achieve sustainable development, reduce greenhouse gas emissions, ensure the country's energy supply and promote efficient energy management. This law establishes the legal framework and instruments required to take advantage of unconventional sources of energy and renewable energy, while promoting investment, research and development of clean technologies for energy production, energy efficiency and demand response.

The law defines unconventional sources of energy as environmentally sustainable energy resources that are globally recognised but in Colombia are not widely used or are not widely marketed, such as nuclear or atomic energy, unconventional sources of renewable energy and those determined by UPME. Further, it defines as unconventional sources of renewable energy as sources of energy that meet the above characteristics and are also renewable energy resources, such as biomass, small hydroelectric, wind, geothermal, solar, sea and solid waste that is not susceptible to being reused and recycled and which UPME has deemed to be environmentally sustainable.

Law 1715 of 2014 classifies activities related to the production and use of non-conventional energy sources (mainly non-renewable energy) as matters of public utility and social interest, with the purpose of facilitating certain requirements, processes and access to benefits in urban planning, territorial planning, environmental planning, economic development and the right to compulsory expropriation, etc. It also assigns competence to entities such as the ANLA and regional autonomous corporations to implement rapid evaluation cycles for projects related to non-conventional sources of energy, and for matters pertaining to this Law.

This Law is especially relevant as it authorises small and large-scale energy self-generators to surrender their surplus to the distribution and transport network, in accordance with the regulations of CREG, and the allocation of energy credits to small-scale energy self-generators using non-conventional sources of renewable energy. Such credits may be negotiated with third parties, in accordance with the regulations issued by CREG. The fund for non-conventional renewable energies and the efficient management of energy (FENOGE) has also been established to finance programmes and projects in this area.

In relation to the above, in February 2018 a change was introduced to the energy sector with regard to the generation and distribution of energy: CREG ruled that users of the electric power service in the country could produce energy and sell it to the SIN.[16] This refers

15 CREG, 'Características generales del Mercado Mayorista: Transacciones en el MEM: Bolsa de energía'. Available at: www.creg.gov.co/cxc/secciones/mercado_mayorista/bolsa.htm, accessed 5 May 2017.

16 See CREG Resolution 30 of 2018.

to small-scale self-generation, up to 1MW, and distributed generation, by means of which all residential users, as well as commercial and small industrial users, who produce energy mainly to meet their own needs, can sell the surplus to the interconnected system.

Law 1715 of 2014 sets out important fiscal, customs and accounting incentives for companies investing in projects of non-conventional sources of energy.

In fiscal matters, it offers an annual reduction in the income tax, for five years after the taxable year in which it makes the investment: 50 per cent of the total value of the investment made, without exceeding 50 per cent of the net income of the taxpayer determined before subtracting the value of the investment.

For these purposes, the taxpayer must obtain a certification of environmental benefit issued by the Ministry of Environment and Sustainable Development. In addition, national or imported equipment, elements, machinery and services that are intended for the pre-investment and investment for the production and use of energy from unconventional sources and for the measurement and evaluation of potential resources will be excluded from the VAT. For these purposes, a certification from the Ministry of the Environment must be provided stating the equipment and services that will benefit from this award, according to the list established by the UPME.

With respect to custom incentives, Law 1715 provides that those who import machinery, equipment, materials and supplies destined exclusively for pre-investment and investment in projects from non-conventional sources of energy are entitled to obtain an exemption with respect to tariff duties.

Finally, as an accounting incentive, companies participating in generation activities with non-conventional energy sources can enjoy the accelerated depreciation benefit, at a depreciation rate of no more than 20 per cent per annum, applicable to machinery, equipment and civil works necessary for pre-investment, investment and operation of such sources, provided that they have been acquired or constructed exclusively for that purpose, and after the validity of this law.

For its full implementation, Law 1715 requires regulation in different governmental entities affected by the measures of the law. Thus, to date, the following aspects have already been regulated, according to the information published by the Ministry of Mines and Energy on its website www.minminas.gov.co:

a Decree 0570 of 23 March 2018 of the Ministry of Mines and Energy, which establishes the public policy guidelines to define and implement a mechanism that promotes long-term contracting for electric power generation projects and that is complementary to the existing mechanisms in the MEM. Additionally, it indicates that the aforementioned mechanism shall endeavour to comply with the following objectives:

- through the diversification of risk, it will strengthen the resilience of the electric power generation matrix during events of variability and climate change;
- it will promote competition and increase efficiency in the creation of prices through long-term contracting of new or existing electric power generation projects;
- it will mitigate the effects of variability and climate change through the use of the potential and complementarity of available renewable energy resources that manage the risk of supplying for future electricity demand;
- it will promote sustainable economic development and strengthen regional energy security; and

- reduce greenhouse gas emissions of the electricity generation sector, to comply with the commitments made by Colombia at the 2015 Paris Climate Change World Summit.

b Decree 1543 of 16 September 2017 of the Ministry of Mines and Energy, which regulates the FENOGE;

c Resolution 1670 of 15 August 2017 of the Ministry of Environment and Sustainable Development, which adopted the terms of reference for the preparation of the environmental impact study in projects for electric power transmission systems;

d Resolution 1312 of 11 August 2016 of the Ministry of Environment and Sustainable Development, which adopted the terms of reference for the preparation of the environmental impact study in projects for the use of wind energy sources and other aspects;

e Resolution 1283 of 8 August 2016 of the Ministry of the Environment and Sustainable Development, which establishes the procedure and the requirements of the certification of environmental benefit to obtain the tax benefits granted by law;

f Resolution UPME 045 of 3 February 2016, which establishes the procedures and requirements for issuing certification and endorsing projects from non-conventional energy sources in order to obtain the benefit of VAT exclusion and exemption from the tariff levy; and

g Decree 2143 of 4 November 2015, issued by the Ministry of Mines and Energy in relation to the definition of the guidelines for the application of incentives established in Chapter III of the law.

In addition, a Decree that intends to develop Law 1715 of 2014, by regulating and providing the guidelines for defining a mechanism for the long-term contracting of generation projects with non-conventional sources of energy (FNCER), in relation to the promotion, development and use of FNCER is yet to be issued.

ii Energy efficiency and conservation

The energy efficiency area of the MME developed the Programme for the Rational Use of Energy and the Use of Renewable Sources of Energy, which aims for energy efficiency and establishes targets for unconventional renewable energies in the SIN, as stated in Law 697 of 2001.

The most recent regulatory advance can also be found in Law 1715 of 2014, which, among other things, orders the MME, together with the Ministry of Environment and Sustainable Development and the Ministry of Finance, to jointly develop an action plan for the development of technical regulations with respect to renewable energies; consumer information on the energy efficiency of processes; facilities, services, products and manufactured products; and information; as well as to promote campaigns on the use of renewable energy sources.

In addition to the above, Law 1715 provides that the national government and public administrations should establish energy efficiency objectives in public buildings and plans and actions of efficient energy management.

iii Technological developments

In addition to the tax and customs incentives created by way of regulation issued in response to Law 1715 of 2014, and certain programmes to provide electricity and the use of unconventional renewable resources in remote areas, no significant regulatory additional developments have been made in the areas of renewable energy and conservation.

However, it must be highlighted that renewable and clean energy projects became especially relevant during 2018 and the first months of 2019, to the extent that it was the first time that in an OEF auction, solar and wind energy were incorporated into the electricity matrix (1398MW installed, representing 6 per cent of installed capacity); the first environmental licence for the generation of photovoltaic energy was granted by the environmental authority;[17] and the first renewable energy auction was carried out by the government. This auction did not result in any awards, since the proposals presented would have resulted in market concentration in excess of the limits set forth in the applicable regulation. The government plans to hold an additional renewable energy auction in the course of 2019.

VI THE YEAR IN REVIEW

In 2018, the Colombian energy sector was strongly influenced by an event related to the biggest developing energy project in the country, the Ituango hydroelectric plant, Hidroituango. Hidroituango is designed to be capable of providing 17 per cent of Colombia's electricity supply, and it was supposed to enter into operation by the end of 2018. However, due to structural damage during the construction process, it is now expected that the project will be subject to at least a three-year delay before it is finished and fully operating.

As a consequence, the government called an OEF auction specifically for the reliability charge.[18] Initially, this auction was planned for the allocation of OEF for the 2022–2023 period. However, due to the urgent need to generate electricity as a result of the delay in Hidroituango's construction – which could lead to an energy shortage, the CREG established incentives for projects that could commence operation before December 2021, the point at which it is estimated there may be an energy deficit.

The reliability charge auction was held on 28 February 2019 and 70 of the 80 projects submitted were awarded. From the awarded projects, 47 were presented by existing plants (electric power generation plants already in commercial operation at the time of the auction), and the remaining projects were presented by new plants (electric power generation plants that have not started construction or that were in this process at the time of the auction). The closing price of the auction was 15.1 US dollars/(MWh), which represents a decrease of 11 per cent compared to the price defined in the last reliability charge auction.

17 ANLA, 'ANLA aprueba primera licencia para generación de energía fotovoltaica. Available at: http://www.anla.gov.co/Noticias-ANLA/ANLA-aprueba-primera-licencia-para-generaci%C3%B3n-de-energ%C3%ADa-fotovoltaica, accessed 16 March 2019.

18 Defined as: the maximum amount of electric energy that a plant is able to generate on a continual basis during a year, in extreme conditions of hydro inflows. CREG. 'Firm Energy Obligation'. Available at: http://www.creg.gov.co/cxc/english/obligacion_energia_firme/obligacion_energia_firme.htm, accessed 17 March 2019.

VII CONCLUSIONS AND OUTLOOK

The Colombian electricity sector has come a long way since the power outages during the 1990s. Privatisation, promotion of investment as well as implementation of regulations have transformed the Colombian electricity sector into an attractive and competitive market in the region.

However, the rapid expansion of the sector and the ongoing dependence on resource-driven sources of energy such as hydroelectric power, still have the capacity to bring the system to a halt, as the 'El Niño' phenomenon showed in early 2016.

In addition to the foregoing, foreign investors have adopted a more cautious attitude towards the country because of the environment of legal uncertainty generated by certain governmental and judicial decisions, especially by the Constitutional Court. Nonetheless, the new government has openly encouraged foreign investment and is creating a positive environment for investors.

The main objectives and challenges faced by the Colombian electricity sector to develop and secure the Colombian market include:

a providing greater legal security to investors;
b attracting greater investment in the electricity sector;
c promoting unconventional renewable resources, aiming to achieve self-sustainable and permanent energy sources;
d advancing regional electric integration;
e increasing the installed capacity and effective generation and reliability; and
f drafting and issuing the necessary regulations for supply and projects of non-conventional renewable energy.

Appendix 1

ABOUT THE AUTHORS

JOSÉ VICENTE ZAPATA

Holland & Knight

José Vicente Zapata is a partner in Holland & Knight's Bogota office with more than 20 years of experience in the natural resources sector. He focuses his practice on corporate and commercial matters with an emphasis on the environment, energy and natural resources. Mr Zapata primarily represents government organisations as well as electric, oil, gas, mining, agrochemical and industrial companies. In addition, he regularly advises clients in the structuring of foreign investment transactions, corporate reorganisations, and mergers and acquisitions as well as matters of environmental liability and judicial proceedings such as class action lawsuits. He has represented clients in many of the largest transactions made in Colombia to date in the mining, oil and gas sectors, in addition to assisting a range of companies in obtaining mining and oil and gas concessions. Utilising his extensive experience in contract negotiations, Mr Zapata has assisted numerous government agencies both in defining the terms and conditions of regulations and in sensitive international judicial cases. Mr Zapata has participated in critical environmental liability cases and class action litigation in Colombia. Of particular importance is his participation in complex cases where communities and companies discuss their corresponding rights and in prior public consultations.

DANIEL FAJARDO VILLADA

Holland & Knight

Daniel Fajardo Villada is an associate in Holland & Knight's Bogota office. He practises in the areas of energy and corporate law assisting local and foreign companies in a wide variety of contractual, regulatory and corporate matters, as well as both domestic and transnational mergers and acquisitions transactions. Mr Fajardo Villada primarily represents energy, oil and gas, and mining companies, as well as other types of corporations. He advises clients in contracting, due diligence, and mergers and acquisitions matters, and also has experience of both litigation and arbitration. He served as assistant professor of general regime of obligations at the Universidad del Rosario, and as an intern at the International Court of Arbitration at the International Chamber of Commerce (Paris, France).

HOLLAND & KNIGHT

Carrera 7 #71-21
Torre A, Piso 8
Bogotá
Colombia
Tel: +57 1 745 5720
Fax: +57 1 541 5417
jose.zapata@hklaw.com
daniel.fajardo@hklaw.com
www.hklaw.com

Law
Business
Research

ISBN 978-1-83862-032-5