


CELSIA

2018 INTEGRATED REPORT

The New Era
of Energy
Drives Us Forward

The energy company of  GRUPO ARGOS


CELSIA
The Energy You Want

COLOMBIA - PANAMA - COSTA RICA - HONDURAS

Contents



01

The Energy You Want

About the Report

The Best of 2018

About Us

Acknowledgements and Certifications



02

Letter from the Chairman of the Board



03

Management Report



04

Our Actions

Corporate Governance

Ethics and Transparency

Human Rights

Regulation

Risk Management

Responsible Supply



05

Our Business

Business Model

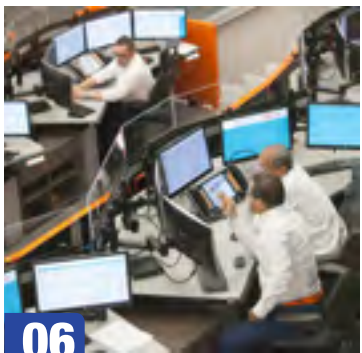
The BHAG

Celsia PermaneC

Generation

Transmission and Distribution

Sales



06

Material Topics

Economic Growth

Our People

Client Experience

Energy Resource Management

Business Diversification

Contribution to Society

Foundations

Conservation of Ecosystems

Environmental Management

Climate Change

Eco-efficiency

Biodiversity



07

Appendices

List of Indicators

Memorandum of External Verification

GRI Content Index

Integrated Report Self-Assessment

Financial Statements

To optimize browsing of this document, open the links in a new window.

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01

The Energy You Want



About the Report

We present our sixth integrated report, which describes how we generate value and the most notable results of our economic, social and environmental performance, always aware of the risks we face, the national and international context, our organizational culture, and corporate strategy.

Here, we deliver the relevant information for our stakeholders, we highlight the main achievements of the year, the opportunities for improvement, and we share our future challenges, which we are now working on, being more efficient and productive.

In 2018, we carried out a new materiality exercise, through which, we identified and prioritized the following topics, together with our stakeholders:

- 

Economic Growth



Development of Human Talent and Occupational Health and Safety
- 

Business Diversification



Energy Resource Management
- 

Client Experience



Conservation of Ecosystems and Contribution to Society

We also defined a common understanding of sustainability called Celsia PermaneC, through which we create a language aligned with our culture.

(102-12) (102-54) This report was prepared according to the essential option of the Global Reporting Initiative (GRI) standards, as well as the Integrated Reporting Framework (IIRC). Additionally, we demonstrated our contribution to the Sustainable Development Goals (SDGs), for which we have carried out prioritization and alignment in each chapter.

(102-45) (102-49) (102-50) (102-51) (102-52) (102-55) The information contained herein corresponds to the period between January 1 and December 31, 2018, and includes our operations in Colombia and Central America (Panama, Costa Rica and Honduras). Any clarification of or exception to this scope will be stated in the document. This report is published annually and the last edition on the 2017 period was published in March 2018. It also includes the management and performance indicators of the businesses in which we participate (transmission and distribution, which are executed by Epsa and Cetsa, companies in which Celsia has a direct or indirect share of more than 50% of the subscribed and paid-in capital). The GRI Content Index and Separate and Consolidated Financial Statements (under the International Financial Reporting Standards, IFRS) are included in the appendices.

(102-48) Although relevant information has not been restated, it is possible that there is updated information or changes to the calculation method for an indicator, which are described in each section in which they occurred. In turn, to maintain the comparison with the figures published in previous reports, the figures are expressed in Colombian pesos and in U.S. dollars at the representative exchange rate (TRM, in Spanish) at the end of 2018 of COP 2,956.43 per U.S. dollar.

(102-56) (102-32) The 2018 Integrated Report has been approved by Celsia’s CEO and Steering Committee. Additionally, Deloitte & Touche Ltda. carried out independent verification in order to ensure the reliability and accuracy of the published information.

(102-53)

For more information
about our report, please write to us at
the email: celsia@celsia.com

The Best of 2018

- 1.** We started up Celsia Solar Bolívar (Colombian Caribbean Coast) of 8.06 MW, which is equivalent to the electricity to supply 7,400 households. It is connected to the National Electrical Grid (SIN, in Spanish).
- 2.** We arrived in Cartagena with innovative projects: We installed solar roofs on the Convention Center and Mall Plaza shopping mall; and we are offering a range of services in Serena del Mar, an urban mega-project in the Caribbean region of Colombia.
- 3.** We installed 27 solar roofs in Colombia, including Racafé in Huila, Universidad ICES in Cali and Universidad EIA in Medellín. We started construction of the solar roof of El Dorado International Airport in Bogotá.
- 4.** We started to generate solar power in Central America. We delivered solar roofs to the first 60 households of La Hacienda residential complex of Grupo Provivienda and we installed another project in Compañía de Galletas Pozuelo in Costa Rica.
- 5.** We started to operate the most modern asset monitoring and control technology center in Latin America: Advanced Vision Operating Center (NOVA, in Spanish). As it is a sustainable construction, it received the LEED Gold certification from the U.S. Green Building Council
- 6.** We completed 17 charging stations for electric vehicles in Bogotá, Cali, Cartagena and Valle de Aburrá, Colombia.
At the beginning of 2019, we installed the first charging station in Panama City. #SustainableMobility is our commitment.



Celsia Solar Yumbo, Valle del Cauca.



7. We completed a Plan5Caribe project in the north of Cartagena and we won another call for tenders to build the Toluviejo substation and for the assembly of 160 km of new networks. At the beginning of 2019, we completed two more projects in Barranquilla and Valledupar.

8. The **ReverdeC** program achieved 2.6 million trees planted in Valle del Cauca. Every two minutes, a tree was planted in 30 municipalities of the department. Now, the region has more trees, which will capture around 13,000 tons of CO₂.

9. **We received notable acknowledgements in 2018, understanding that the best prize is for clients to choose us.**

- » We entered the Dow Jones Sustainability Index for the Latin American Integrated Market (MILA, in Spanish) for the first time.
- » We obtained the **Bronze Class Distinction in the Sustainability Yearbook** of the RobecoSAM firm.
- » We came in 50th place in the Corporate Reputation Monitor (MERCO, in Spanish) in Colombia and in third place in the energy, gas and water sector.
- » In Merco Panama, we entered the group of the 100 companies with the best reputation.
- » We came in sixth place for the best places to work in Colombia according to the *Great Place to Work Institute*.
- » We won the **Best Infrastructure Financing in Central America** award from the *Latin Finance* magazine.

10. With the successful share issuance, we generated COP 1.47 trillion to enhance our strategy. With this issuance, we increased our shareholding in Epsa by 11.3% and we strengthened our capital structure.

11. We carried out important business restructuring to drive Epsa as a platform for growth in Colombia with the sale of several of Celsia's generation assets and commercial representation of the Meril  ctrica thermal power plant.

12. Through Epsa, we became the first company in the real sector to structure a green bonds program, which amounted to COP 420,000 million, in order to finance the development of non-conventional renewable energy projects.

13. We are one of the companies with the best quality electricity service in Colombia: only 11.7 hours of interruption to the service in the year and a frequency of 15.1 times, compared to the national average of 39.5 hours and 51 times.

14. We transformed 26 schools in Colombia. More than 7,000 students and 262 teachers in Valle, Tolima, Antioquia, Cauca and Santander now enjoy renovated and healthy school environments.

15. We opened our first energy efficiency store and e-commerce platform: TiendaCelsia.com. We also launched our own brand of lighting: Vive.



Acknowledgements and Certifications

(102-12, 102-13)

These distinctions fill us with pride and motivate us to keep achieving great goals.

Sustainability

- » First time in the **Dow Jones Sustainability Index for the Latin American Integrated Market (MILA, in Spanish)**.
- » One of the 100 companies in the world with the best environmental, social and governance performance according to the Vigeo Eiris certification agency.
- » One of the ten companies with the greatest private voluntary support of social causes in Colombia according to the Private Social Investment Index (IISP).
- » **Bronze Class Distinction of RobecoSAM's "Sustainability Yearbook"**.

Reputation and Corporate Governance

- » **50th place in Colombia** in the Corporate Reputation Monitor (MERCO).
- » First place in the sector in Merco Digital for the quality of our interaction on social networks.
- » One of the top 100 most reputable companies in Merco, Panama.
- » **Investor Relations (IR) recognition by the Colombian Stock Exchange** for transparency and corporate governance. Six consecutive years.

Human Talent

- » **Sixth place in the best places to work in Colombia** (more than 500 employees category) according to the Great Place to Work Institute survey.
- » 22nd place in Merco Talento Colombia.

Environmental Commitment

- » **ReverdeC**, finalist in Caracol Television Awards for Protection of the Environment in the Large Company category.
- » Award from the Foreign Trade Association (Adicomex) for the Environmental Responsibility and Innovation projects.
- » **Gold Certification for Leadership in Energy & Environmental Design (LEED) for NOVA**.
- » Blue Flag Ecological Program award in the Climate Change category for the Guanacaste wind farm.

Financial Management

- » **Best Infrastructure Financing in Central America** award granted by the *Latin Finance* magazine, for placing USD 320 million in corporate bonds in Panama.
- » Prize from the Panamanian Securities Exchange for the Best Long-Term Issuance.

Environmental Management System

- » Renewal of the ISO 14001 certification for operations in Colombia and extension to the Hidromontañas and Río Piedras power plants and the Guanacaste wind farm in Costa Rica. Additionally, Zona Franca Celsia was certified for the first time.

Portafolio

Celsia, the only Colombian company among the top seven global energy companies in the 2019 RobecoSAM Sustainability Yearbook.

February 17, 2019



02

Letter from the Chairman of the Board





Dear shareholders,

(102-14) Thanks to your trust in Celsia, together we managed to end 2018 with transformational progress that clears the way to keep growing with strong steps forward in the energy sector, not only in Colombia, but also in Latin America.

The speed that Celsia has acquired to carefully and flexibly evolve, added to its vibrant internal culture of innovation and customer service, is key to positioning it as an increasingly more important player in this sector of the economy.

This evolution is in the DNA that the Grupo Argos companies share, where it is imperative to generate shared value in a framework of profound responsibility, adherence to ethics and conviction to sustainability.

Together with the Colombian Stock Exchange, in 2018, we progressed in the simplification and optimization of the corporate structure of this business, achieving operating and financial synergies and making Epsa our vehicle for investment and growth in Colombia.

The above was possible firstly, thanks to a successful share issuance of Celsia, widely supported by the country's investors and secondly, to the transfer of operating assets

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to Epsa, managing to concentrate our operations in Colombia in this company, together with our valuable partners in Valle del Cauca.

This powerful administrative transformation was also accompanied by a series of development initiatives of strategic assets for the country's energy matrix. Out of which, I would like to highlight the start-up of four of the seven projects of Plan5Caribe Phase I. Together, they comprise investments of approximately COP 450 billion, which will strengthen the electricity transmission network in the Colombian Caribbean. Additionally, I highlight the opening of Celsia's solar farms in Valle del Cauca and Bolívar, the first in Colombia in this technology, as well as the start of works on the San Andrés project in the department of Antioquia, among others.

In five years, we hope that 30% of the energy we generate each year is non-conventional (solar and wind power).





Epsa Headquarters,
Yumbo,
Valle del Cauca.

Demonstrating that innovation and sustainability are levers of value reflected in the market's confidence, I would like to highlight Epsa's issuance of COP 420 billion in green bonds, which went down as the first company in the Colombian real sector to offer this kind of bond, as well as the issuance of corporate bonds in Panama amounting to USD 320 million, with which the Central

American business improved its leverage indicators.

All of this progress is part of a disciplined strategy for profitable growth in the electricity sector. This strategy had an important milestone at the start of 2019, completing the acquisition of Enertolima's electricity assets. I would like to emphasize that we have the challenge of taking Celsia's seal of quality and proximity to this region, using all our knowledge to achieve the levels of service that position us today as leaders in quality and low interruption frequency in the country for our operations in Valle del Cauca.

Now, we reach thousands of electricity consumers in Tolima with the commitment to responsible action, hoping to generate the best shared value, in a decisive goal to be long-term allies in the development and competitiveness of this region.

At Celsia, we are inspired to set an example as a company for our stakeholder relations, our capacity to generate value and our respect for the environment in all the areas where we operate.

This effort has been acknowledged by our inclusion in the Dow Jones Sustainability Index for the Integrated Latin American Market (MILA, in Spanish) and receiving the Bronze Class Distinction in the Energy and Utilities category in the 2019 Yearbook, as well as coming in sixth place in the prestigious ranking of the Great Place to Work Institute in Colombia.

With your support, esteemed shareholders, we keep taking strong steps forward in the strategy to establish ourselves as a different competitor that is ready to take advantage of the industry's global trends for the generation of shared value and the promotion of development and competitiveness in all the regions where we operate.

Jorge Mario Velásquez
Chairman of the Board

03

Management Report



Dear Shareholders

One year ago, we started our Shareholders Meeting thanking you for your support in the issuance of shares, a transformational operation that drove us to take a strong step forward in the implementation of the strategy. With the COP 1.47 trillion of the issuance, we increased our share in Epsa, achieving 61.3% with an investment of COP 738,000 million and we managed to pay off a debt of COP 740,000 million early.

Today, we would like to present you with the events and results that demonstrate this progress, with significant developments in renewable energy, in strengthening our operations in Colombia and Central America, and in creating an innovative portfolio of energy solutions that attracts a growing number of clients and allows them to experience a different service experience with us.

Energy Efficiency in the New Era for Energy

Convinced of the need to go beyond the electricity meter, at Celsia, we are creating bespoke comprehensive solutions to meet our clients' needs and expectations. Today, Celsia's clients have solutions available to them such as solar energy, cooling districts, electricity assets, building automation, backup generators,



efficient lighting, electric transit and energy storage. This is a complete package, which enables them to consume energy efficiently and be more productive and sustainable.

At the end of the year, we had around 624,000 clients, 20,000 more than in 2017. This effort was converted into the 2,285 GWh that we delivered: 1,213 GWh to the regulated market with 3% growth and 1,072 GWh to the non-regulated market, increasing 12%. The good performance in the non-regulated market is due to us finding new clients in other regions, thanks to which we now have more than 300 clients outside of Valle del Cauca. Currently, 84% of invoicing is in our own market and 16% has been diversified to other regions, mainly in Bogotá, Antioquia, Córdoba and Bolívar.

In our Business and City segments, we have clients such as Sura, Alúmina, Tecnoquímicas and Postobón,

for which we develop products that enable them to be more productive and sustainable, and to achieve their targets in energy efficiency.

In 2018, we worked hard on the Serena del Mar urban megaproject, which will develop 17,000 homes for a population between 50,000 and 60,000 people. Through an alliance with the project developer, Novus Civitas, we will provide innovative and sustainable solutions, which will add to our new Business portfolio. We will provide a complete sales portfolio, including electricity, thermal energy and fiber-optic internet.

Sunset at Guanacaste wind farm, Costa Rica, where we generated 227 GWh in 2018.



Cartagena Convention Center: 1,656 photovoltaic solar modules supply 18% of its energy consumption.

The Home segment increased 47% last year and we keep exploring new channels to reach the end client. In May, in Palmira, we opened our first store exclusively for providing electricity advice and selling efficient electrical products. Additionally, we launched the online channel tiendacelsia.com, which brings us closer to clients who prefer to make online purchases.

Our commitment to a different way of bringing electricity to clients is a reality and we will keep strengthening this business in other urban developments that are being built in the region.

Passionate about Renewable Energy

One of the most relevant trends in our sector is the increase in non-conventional renewable energy sources and at Celsia, we are committed to solar energy and wind power projects. We ended 2018 with 84 MW of installed capacity from clean energy sources and in five years, we hope to have another 560 MW, so that 30% of the annual generation from renewable sources will be non-conventional.

The progress in solar energy in Colombia is notable. Celsia Solar Bolívar started to deliver energy at the end of 2018. Located in Santa Rosa de Lima, department of Bolívar, this solar farm has a capacity of 8.1 MW and USD 8 million were invested in its construction. In the expansion plan, we have solar farm projects in Valledupar, Santander and Tolima, which will add an important capacity of megawatts and which we hope to start building in 2019 and early 2020.

Similarly, our clients have gained the same enthusiasm for solar energy. At the end of 2018, we had installed 6 MW in solar roofs and an additional 18 MW are in the installation process. The agreement reached with Odinsa stands out, for Celsia to become its partner in energy efficiency. El Dorado International Airport will have a solar roof with a capacity of 2.8 MW, enabling the generation of 3.9 GWh/year, which comprises 12% of the terminal's electricity consumption, equivalent to the consumption of 1,590 households.

Our drive for renewable energy can also be

seen in Central America. In Panama, we acquired Divisa Solar, a solar farm with a capacity of 9.9 MW. Celsia Solar Prudencia is also ready to start construction, a neighboring solar farm of our hydroelectric operation with a capacity of 11.0 MW, which will add to the 1.8 MW of solar roofs under construction. In Honduras, we will build a solar farm of 10.6 MW, which will supply electricity to the Piedras Azules power plant of Cementos Argos in Comayagua.

Additionally, we achieved important milestones in energy generated from wind power in 2018. At Guanacaste wind power plant, Costa Rica, which has a capacity of 49.9 MW, we carried out maintenance on 26 blades and changed the stator coil in ten wind-generation units, extending their useful life. Last year, our wind power generation achieved 227 GWh/year with 35% growth.

Today, Celsia's clients have solutions available to them such as solar energy, cooling districts, electricity assets, building automation, backup generators, efficient lighting, electric transit and energy storage.



We are developing 330 MW in this kind of project in four wind power plants in La Guajira, Colombia, which already have an environmental license and connection application approved by the Mining and Energy Planning Unit (UPME, in Spanish), although with different stages of maturity in the connection line. The first 80-MW park will be delivering clean energy to the country in 2022.

The interest currently generated by renewable projects requires us to seek options to enhance our range of assets with a constant commitment to the environment and to our country. Reduction of carbon emissions is a global imperative and our mission is to achieve a healthy balance between the different sources of power generation, also taking advantage of the fact that the solar and wind farms are becoming increasingly more competitive with respect to the hydroelectric and thermal power sources.

Epsa, an Investment Platform that Consolidates Operations in Colombia

(102-10) Specifically in an effort to organize and simplify our operations, at the end of

2018, we announced the sale of some generation assets and the commercial representation of Merilétrica being granted to Epsa, consolidating our Colombian operations in said company. This contributes significant operating synergies and administrative efficiencies, and enables our growth in national transmission and specialization in implementation, making us faster and more competitive.

Epsa has been successful as an investment platform. We have 61.3% of its shareholding and the valuable support of some partners, such as Emcali and CVC, which have enabled us to develop our growth and transformation strategies to reach new markets and to attend more clients.

Now it is our job to keep finding structures that enable us to progress and accelerate the execution of the strategy, achieve efficiencies, enhance the capital structure and maintain value generation for you, our shareholders.

Business Performance

Next, I would like to present the most relevant aspects of the asset management business:

Transmission and distribution is an attractive activity because of its capacity to produce relevant and sustainable cash flows and in 2018, we made important progress: We improved our electricity infrastructure in Valle del Cauca, achieving a significant improvement in the quality of the energy service. Our SAIDI was 11.7 hours of interruption to the service in the year, improving 28%. The SAIFI was 17.5 times with a 10% improvement. Both results are very positive with respect to the national average, which is 39.5 in hours and 51.3 in frequency. We also achieved reliability of the transmission and distribution networks above 99.8% and energy losses in the grids of 8.3%, a better indicator than the proposed targets.

All of this is thanks to us making investments of COP 126,000 million to strengthen our electric power grid and increase its capacity. We increased the medium voltage distribution networks by 156 km and the low voltage distribution networks by 157 km.

We will complete on time the fourth of the six Plan5Caribe projects granted to us. In the Bolívar Department, we built two substations, we improved another two and



Valledupar substation in Cesar. Work that is part of Plan5Caribe.

The interest currently generated by renewable projects requires us to seek options to enhance our range of assets with a constant commitment to the environment and to our country.



Now it is our job to keep finding structures that enable us to progress and accelerate the execution of the strategy, achieve efficiencies, enhance the capital structure and maintain value generation for you, our shareholders.

we installed 21 km of new 110-kilowatt grids. The investments in Plan5Caribe last year amounted to more than COP 161,000. In the first quarter of 2019, in line with the dates agreed with the Energy and Gas Regulatory Commission (CREG, in Spanish), we started the two remaining projects: one to build and extend substations in the Atlántico Department and the other to build a substation in the Cesar Department.

In new calls for tenders, the UPME awarded us the construction of the Tolviejo substation (220 kilowatts) in the Sucre Department and 160 km of the Chinú – Tolviejo and Tolviejo – Bolívar transmission lines (220 kilowatts). These works were included in the country's Electricity

Transmission Expansion Plan. This project must be operating in the second half of 2022 and will require an investment of approximately USD 70.5 million. It will enable us to have a more reliable and better quality electric power grid. Furthermore, it will make viable the future connection of generation projects. We will keep looking for opportunities in this kind of investment.

In notable regulatory affairs of the transmission and distribution business in 2018, through Resolution 40092, the Ministry of Mines and Energy established the guidelines for the installation of the advanced metering infrastructure (AMI) by the grid operators and proposed the minimum operating requirements. This resolution will enable the widespread growth of this infrastructure, which will facilitate the development of our new energy efficiency businesses, responding to the demand and self-generation.

In generation, we had a year marked by the upgrade and renovation of several of our power plants, which will enable improved operation in the upcoming years. We carried out technology upgrades that enhance use of the water resource and decrease the operations' risk factors to the extent that in Bajo Anchicayá, for example, we managed

to recover all of the power plant's installed capacity, achieving 74 MW. At Alto Anchicayá, a 355 MW hydroelectric power plant, we increased the efficiency by 4%, and in Ríofrío, which has 11.7 MW, we increased the efficiency by 6%.

Parallel to this, we are improving the automation program of this operation. With a pilot program implemented in 2018, we were able to remotely operate the Río Cali power plant. We are going to extend this program in 2019 and we hope we will also be able to operate

the Amaime, Alto Tuluá and Bajo Tuluá small hydroelectric power plants (SHPP) through this program from our NOVA control center.

In Colombia, consolidated hydroelectric power generation amounted to 4,015 GWh/year with a 6% decrease from 2017. This performance is explained by the strategy implemented to enhance use of the water resource during the second half of the year, in response to a forecast drought at the end of 2018 and beginning of 2019. However, the surplus water levels between April and July

Alto Anchicayá Hydroelectric Plant, Valle del Cauca, Colombia, 335 MW.





In 2018, the investments in Plan5Caribe amounted to more than COP 161,000 million. Caracolí substation, Barranquilla, Colombia.

and a small increase in the system's energy demand led to the reservoirs maintaining their reserves above 70% during the second half of the year, having repercussions on the spot market price during the rainy season.

With respect to the hydroelectric power generation projects, the San Andrés SHPP has 35% execution. We progressed with digging the trenches for the access roads and manufacturing the penstock and the electromechanical equipment. Work continues on the underground structures, tunnel and foundations of the powerhouse. This power plant, located in San Andrés de Cuerquia (Antioquia), will have a capacity of 19.9 MW and it is generating around 400 direct and indirect jobs in this construction stage. It is estimated to be operating in 2020. We financed this using cleared funds provided by Findeter at a very competitive rate of the IBR plus 1.55% in a 12-year term.

The Porvenir II project, which has a capacity of 352 MW and an estimated investment of more than USD 800 million, has been subject to a detailed analysis by Management and the Board of Directors. After analyzing multiple options and particularly the financial impact that it would have on our growth plans, we have decided that

the best alternative for this project is to find an investor to assume leadership of it. We are currently in this process.

In Panama, we upgraded the whole maintenance system of the Dos Mares hydroelectric complex with prevention plans that will enhance the maintenance times. In 2018, we achieved the generation of 465 GWh/year in said country with a 3% decrease from the previous year as a result of the lower water levels.

Thermal power generation in Colombia increased 47%, amounting to 1,393 GWh/year, due to the increased restrictions in the area of the Caribbean Coast, which resulted in the repeated dispatch to Zona Franca Celisia throughout the year. Although the restrictions increase generation, the effect on the margin is neutral, because the system only recognizes the equivalent to the costs in income.

In Panama, the thermal power generation of BLM amounted to 392 GWh/year, decreasing 12%, mainly due to the periods of high rainfall for the system and the entry of a combined-cycle power plant into Panama's electricity matrix.

Our thermal power plants also had important alterations, which improved



their performance and productivity. At Zona Franca Celsia, we carried out major maintenance between April and May. With an investment of more than COP 26,000 million, we improved the power plant’s reliability and thermal efficiency and recovered 10 MW of capacity in the combined cycle. In the BLM and Cativá power plants in Panama, we carried out maintenance that ensures the reliability of the units in order to meet the system’s commitments.

The BLM power plant, 51% owned by Celsia and 49% owned by the Panamanian government, which has provided 11% of Panama’s total power generation over the last three years and contributes 12% of the country’s installed capacity, recorded the expiry of the energy sales contract in December.

The asset management business is essential for our Organization and drives us to progress in the new businesses and to be able to make the strategy a reality.

The Year in Figures

The businesses achieved good operating and financial results. The consolidated revenue amounted to COP 3.4 trillion, increasing 11% from the previous year. The generation business contributed COP 2.0 trillion, 6.3% more than in 2017. The distribution business contributed a consolidated revenue of COP 1.3 trillion, 12% more than in the previous year.

In revenue, we highlight the EBITDA of COP 1.13 trillion; equivalent to 2% growth. The net profit recorded was COP 351,000 million, with a 40% increase and the net income attributable to the controlling shareholders amounting to COP 228,000 million, a 53% increase from 2017. In terms of our individual financial performance, revenue amounted to COP 258,000 million with an adjusted



Dos Mares hydroelectric complex, Panama.

EBITDA by Business

	Generation	Transmission and Distribution	Sales	Total
	COP 797,427	COP 327,098	COP 10,527	COP 1.13
Share	70.3%	28.8%	0.9%	trillion



EBITDA for dividends of COP 179,000 million, a 23% increase and a net profit of COP 543,000 million. It is important to note that the separate net profit value includes the profit from the sale of assets traded with Epsa, which amounts to COP 315 billion. Without including said sale, the individual net profit would have been COP 228,000 million, with a 24% increase.

The operating and financial performance, as well as the use of funds from the share issuance in February last year, enabled the payment of debt and the development of the investment plan in 2018, and led to a net debt / EBITDA ratio

of 2.7 times, lower than the 3.2 times of 2017. The same ratio at Celsia individually decreased from 6.8 times to 3.5 times.

We have a competitive source of resources for the development of renewable energy projects since June 2018 thanks to the issuance of Epsa green bonds, which had an authorized amount of COP 420,000 million. This financial instrument promotes environmental projects with low carbon emissions that are resilient to climate change, contributing to a sustainable growth and economic development model.

Last year, two tranches of this bond program were issued for a total amount of COP 140,000 million, which made us the first company of the real sector in Colombia to issue green bonds.

The important progress in the consolidation of the strategy and the financial performance enabled us to maintain the credit risk rating at AA+. In turn, Epsa's credit rating remained unchanged at AAA, a rating it has maintained for 18 years.

Shareholders, the 2018 results were outstanding, not only in profit, but also in strategy. However, we consider that last year's share price did not reflect the effort we made during the year. The share price underwent a devaluation of 14.4%, while the COLCAP index dropped 9.5%. There was volatility of the capital markets in most of the emerging economies last year.

We are fully committed to generating value for you and we hope that the market reflects this in the share price in 2019 and years to come. We remind you that Celsia has

achieved outstanding results since its creation. A shareholder that had invested COP 100 from July 2002 would now have COP 3,082 due to valuation, plus another COP 1,017 from dividends, for a total of COP 4,099, a higher figure than the COP 1,258 that an investor would obtain in the index of the Colombian Stock Exchange in the same period from valuation and dividends.

Communities and the Environment Are Part of Our Essence

Protection of natural resources and the quality of our relations with the communities in our areas of influence are part of our essence. In 2018, we invested more than COP 20,000 million in voluntary social programs, benefitting around 300,000 people in areas including access to energy, improvement of roads, quality of education, development of business activities and health promotion.

Fundación Celsia and Fundación Epsa kept working on the quality of education as a cornerstone for development in the regions, managing to benefit 332 educational institutions with programs in 2018. We highlight the improvement of energy and water infrastructure in 26 schools through our Enciende program, which enables the educational community to enjoy better lit, healthier and safer areas; the Verde Vivo (Going Green) project, an environmental education methodology that has become a key program for the Business Group with its subsidiaries; and the strengthening of teachers' capacity in essential subjects such as mathematics, language and leadership. All of the above has benefited



The year 2018 was one in which we increased the speed of implementation of our strategy. The results enable us to keep growing, strengthening the businesses and progressing in projects that make us a more profitable company, focusing on customer service and on sustainable investments that generate value options for our shareholders."



RICARDO SIERRA
Celsia CEO



2,940 teachers and 96,573 students.

Celsia’s voluntary environmental investment amounted to COP 7,500 million in 2018, which can be seen in initiatives in Colombia, including the **ReverdeC** program, the *Huella Viva* project, and research agreements with universities. In Central America, we started environmental activities in the development of operations, measures to control atmospheric and noise emissions, and reforestation projects.

Our **ReverdeC** program continues to make strong progress. To date, we have planted more than 2,600,000 trees in 30 municipalities of Valle del Cauca, reforesting more than 2,200 hectares in 22 water basins and contributing to the conservation of seven endangered forest species. We also encouraged community participation in the program, achieving that 100% of the workforce and suppliers are from local communities, generating 1,800 jobs and the incorporation of 33 organizations through this.

A Culture that Defines Us and Sets Us Apart

Our 2018 achievements would not have been possible without the talent and passion of



Our 2018 achievements would not have been possible without the talent and passion of our employees, who are the engine that drives and facilitates the businesses.

our employees, who are the engine that drives and facilitates the businesses by conviction, thanks to the cultural transformation that we have undertaken and the quality of life that the Company offers.

We progressed with the “Yo Elijo Cuidarme” (I Choose to Look after Myself) program, focused on safety being a lifestyle. The Management System not only focuses on fulfilling the current legal requirements, but also allows us to progress by executing action plans that ensure adequate conditions for the development of safe work. With the application of tools, we have managed

More than 1,600 employees experience the culture that defines us and sets us apart.



Employees receive the Great Place To Work Institute recognition, which measures the best places to work in Colombia.

to achieve a 35% reduction in our accident frequency indicator from 2016; the year we started the program.

A good work climate was reflected in the survey of the Great Place to Work Institute. The Company came in sixth place for the best places to work in Colombia, climbing five places from 2017.

Support of Our Activities

Celsia received important public acknowledgements in 2018. For the fourth year in a row, we have been part of the RobecoSAM Sustainability Yearbook and for the first time, we obtained the SAM Bronze Class Distinction in the energy sector. In recent years, we have continuously improved our rating on the Dow Jones Sustainability Index. We have already been invited to participate in the Dow Jones Latin American Integrated Market (MILA, in Spanish) and we obtained the best score out of the sector's companies located in Mexico, Peru, Chile and Colombia. Furthermore, we came in seventh place in global utilities. We are very proud to be one of the most sustainable companies in the world.

In the Merco Reputación ranking, we came in 50th place out of 100 companies with the best reputation in Colombia, climbing 34 places over the last three years.

We are one of the most sustainable countries in the world: Bronze Class Distinction in the RobecoSAM Sustainability Yearbook and best score in the Dow Jones Mila in the energy sector.



Driven to the Future with Good Energy

Dear shareholders, we hope that this outlook of the new era for energy that Celsia represents in the region is not only an attractive slogan, but also a palpable reality for our clients. We want this evolution and its results to delight you as much as it delights us. We will assume the great challenges of 2019 with decision and passion. We will work tirelessly to obtain the best results, integrating our culture of innovation, technology capacity and customer service experience. We will keep driving the incorporation of renewable energy and enhancing the management of our assets. Additionally, as businesspeople and citizens, we will keep giving our best energy to a country that deserves the best future.

Jorge Mario Velásquez
Gonzalo Alberto Pérez
Alejandro Piedrahíta
Eduardo Pizano
María Luisa Mesa
María Fernanda Mejía
David Yanovich

Board of Directors

Ricardo Sierra
CEO

Medellín, February 19, 2019

Protection of natural resources and the quality of our relations with the communities in our areas of influence are part of our essence. In 2018, we invested more than COP 20,000 million in voluntary social programs, benefiting around 300,000 people.

Below, you will find the evolution of legal affairs and corporate governance as an appendix to this report.

Appendix – Legal Affairs and Corporate Governance

Celsia duly addressed its legal affairs and did not receive any notification of lawsuits or penalties that could affect its financial position.

The performance of the financial information disclosure and control systems was verified through different activities carried out by the Statutory Auditor, the Internal Audit Department, and the Board of Directors through the Audit, Finance and Risk Committee, which concluded that these systems operate satisfactorily. Among these activities, those that stood out were the review of the financial statements by the Statutory Auditor; the assessment of the adequate design and operation of the Internal Control System by the Internal Audit Department; and quarterly monitoring of financial statements by the Audit, Finance and Risk Committee, which includes the analysis of transactions with related parties.

The Company complied with applicable legislation related to intellectual property and copyright, and operations with administrators

and shareholders were undertaken pursuant to the provisions of corresponding regulations and in response to market conditions. Notes 34 and 35 of the individual and consolidated financial statements, respectively, describe these transactions. Additionally, in compliance with Law 1231/2008, amended by Law 1676/2013, the Company did not obstruct the free circulation of invoices issued by suppliers.

Aspects related to Article 446 of the Code of Commerce are included in the financial statements, the Statutory Auditor's Report and this document, which are posted on the Company's website. Meanwhile, the Business Group's report, with reference to Article 29, Law 222/1995, can be found in the additional information distributed to shareholders, along with the Corporate Governance Report.

Finally, on the website: www.celsia.com, you can find the report on the implementation of the *Código País* survey recommendations.



Calima hydroelectric power
plant – Valle del Cauca

04 Our Actions

Corporate Governance

Our Organization has a clear governance system with defined controls (control architecture) and a commitment to timely disclosure of sufficient information, which help to mitigate the risks related to reputation, generating trust among our stakeholders and facilitating access to new businesses, markets and clients.

We inform our stakeholders of the way in which we manage corporate governance and make this known to them through our Company Bylaws, Corporate Governance Code, Code of Business Conduct and corporate policies. These guidelines are published on our website.



What does corporate governance contribute to the achievement of our BHAG?



“Corporate governance, transparency and responsible corporate conduct practices are key elements to reduce the cost of capital, increase the base of investors in the capital market, increase competitiveness and empower our value generation.”

JESÚS MARÍA CADAVID

Investor Relations Manager, Celsia

(102-18) Governance Structure



The General Meeting of Shareholders is our highest decision-making body.



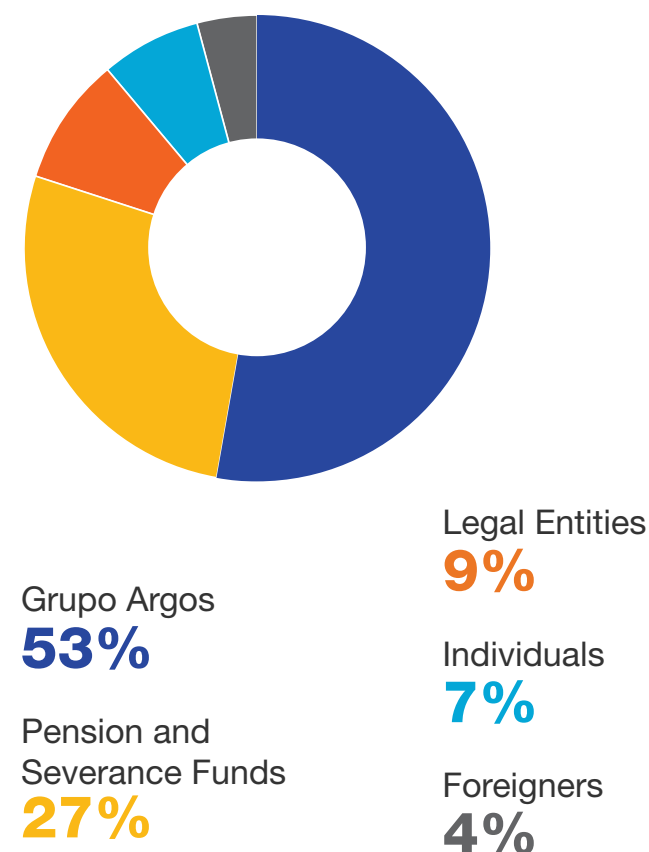
(102-19)

General Meeting of Shareholders

The General Meeting of Shareholders is the highest corporate body and is comprised of all the Company’s shareholders.

This body delegates the broadest mandate for managing the Company to the Board of Directors. Therefore, the Board has sufficient power to order any action or contract to be executed within the corporate purpose.

Shareholder Structure




From left to right:
Gonzalo Alberto Pérez
Eduardo Pizano
María Luisa Mesa
Jorge Mario Velásquez
María Fernanda Mejía
Alejandro Piedrahíta
David Yanovich

Board of Directors

The Board of Directors is comprised of seven principal members, elected by the General Meeting of Shareholders for two-year periods. This is without prejudice to the power of the General Meeting of Shareholders to freely dismiss or re-elect them indefinitely, for which the term to be deemed independent members must be taken into account for those elected in that category.

The majority of Board members (i.e., four members) elected for a certain term meet the requirements to be deemed independent members according to the declaration of independence of the Board of Directors that they provide at the time they are nominated. The requirements to be deemed as such are provided in the Company’s Corporate Governance Code, which is a public document.



To read the Corporate Governance Code, please [click here.](#)



(102-18, 102-22, 102-23, 405-1) Board Members during the Term

Name	Jorge Mario Velásquez	Alejandro Piedrahíta	Gonzalo Alberto Pérez	María Fernanda Mejía	María Luisa Mesa	David Yanovich	Eduardo Pizano
Independent (yes/no)	No	No	No	Yes	Yes	Yes	Yes
Company where he/she works	Grupo Argos S.A.	Grupo Argos S.A.	Suramericana S.A.	Freelance	Mesa González y Asociados	Cerrito Capital	Freelance
Position	CEO	Chief Financial Officer	CEO	Advisor	Partner	CEO	Consultant
Executive – non-executive	Non-executive	Non-executive	Non-executive	Non-executive	Non-executive	Non-executive	Non-executive
Years as a Board member	3	3	18	6	6	4	2
Board committee(s) of which he/she is a member	<ul style="list-style-type: none">Sustainability and Corporate Governance CommitteeAppointment and Remuneration Committee	<ul style="list-style-type: none">N/A	<ul style="list-style-type: none">Sustainability and Corporate Governance CommitteeAppointment and Remuneration Committee	<ul style="list-style-type: none">Audit, Finance and Risk Committee	<ul style="list-style-type: none">Sustainability and Corporate Governance Committee	<ul style="list-style-type: none">Audit, Finance and Risk CommitteeAppointment and Remuneration Committee	<ul style="list-style-type: none">Audit, Finance and Risk Committee
Name of the companies where he/she is a member of the Board of Directors	<ul style="list-style-type: none">Grupo Sura S.A.Cementos Argos S.A.Odinsa S.A.	<ul style="list-style-type: none">Odinsa S.A.Grupo Sura S.A.Aceros Mapa S.A.	<ul style="list-style-type: none">Bancolombia S.A.Grupo Nutresa S.A.	<ul style="list-style-type: none">Positive ID S.A.	<ul style="list-style-type: none">Casa Editorial El Tiempo (CEET)Sociedad Administradora de Fondos de Pensiones y Cesantías Porvenir S.A.	<ul style="list-style-type: none">Ocensa S.A.Agrícola Oriente S.A.Credifamilia Compañía de Financiamiento S.A.	<ul style="list-style-type: none">Invercolsa S.A.Cusezar S.A.



Corporate Governance • Ethics and Transparency • Human Rights • Regulation • Risk Management • Sustainable Supply Chain

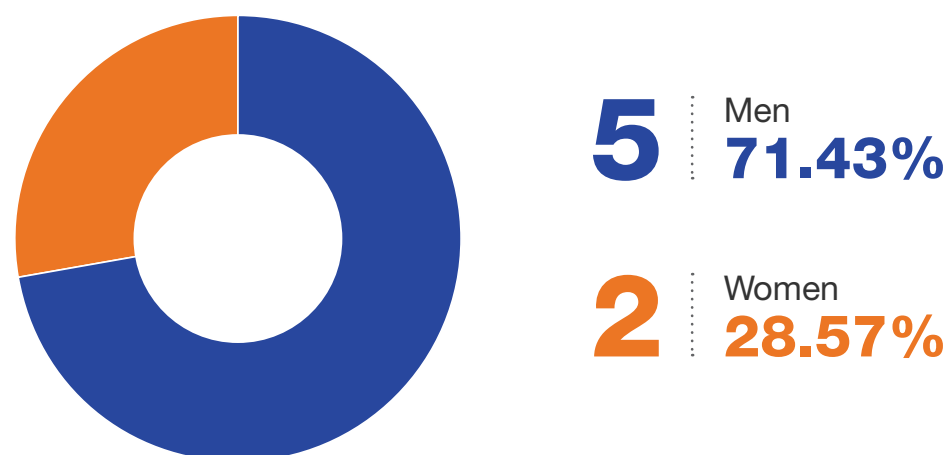
Name	Jorge Mario Velásquez	Alejandro Piedrahíta	Gonzalo Alberto Pérez	María Fernanda Mejía	María Luisa Mesa	David Yanovich	Eduardo Pizano
Skills related to sustainability issues	Civil Engineer Current CEO of Grupo Argos, one of the most prominent companies in Colombian and international sustainability indexes. Through work in different positions at Cementos Argos and as CEO of Grupo Argos, he has acquired experience in financial, environmental, social and strategy matters.	Business Administrator As well as his studies, his career in the financial sector (Banca de Inversión Bancolombia, Corfinsura and Susalud) has given him skills in this subject.	Lawyer Current CEO of Suramericana and formerly the Chief Corporate Business and Insurance Officer at Inversura. His professional career has afforded him financial, strategic, economic and social skills, and he has a particular interest in issues related to sustainability.	Public Accountant She is currently the CEO of Mac-Johnson Controls Colombia and EMA Holdings. Her academic background and professional experience have equipped her with skills in auditing, issues related to corporate social responsibility, and economic, environmental and social matters.	Lawyer Her experience at the Superintendency of Corporations and Avianca, and as an advisor on legal affairs has given her knowledge in financial and legal topics.	Industrial Engineer More than ten years of experience in the electricity and mining sectors as the General Manager of Colgener, Director of Investment Banking at Corporación Financiera del Valle, and as a freelance consultant for financial structuring on diverse projects related to the energy sector in Colombia. His career has equipped him with knowledge of the sector and the business, and with the skills required to serve as a member of Celsia's Board of Directors.	Lawyer Experience in financial matters and knowledge of the electricity business and the sector. He has been Minister of Economic Development, Senator, Secretary General of the President's Office, and Corporate Consultant and CEO of Naturgas (Colombian Natural Gas Association).
Number of Board meetings attended	11 out of 15*	11 out of 15*	13 out of 15	14 out of 15	13 out of 15	15 out of 15	13 out of 15
Percentage of Board meetings attended	71%	71%	86%	93%	86%	100%	86%

* In consideration of the topics that would be discussed and decided at two Board meetings, and fulfilling the practices of transparency and corporate governance adopted by the Company, Jorge Mario Velásquez and Alejandro Piedrahíta did not attend two of the Board meetings as they are employees of Grupo Argos.



To find out the members of the committees and their functions, please [click here](#).

(405-1) Members of the Board of Directors



(102-24) Election of the Board of Directors

Body responsible for election: General Meeting of Shareholders.

Method of election: Through the electoral quotient system, unless appointment is carried out unanimously.

For the election of the Board of Directors, the General Meeting must take into account:

- » The notice with which shareholders are required to submit their proposals.
- » Gender diversity.
- » Candidates must have a recognized professional career, experience in business management, diversity of knowledge and outstanding personal and moral qualities.
- » People who are seventy-two (72) years old or older cannot be elected, except when it is expressly authorized by the General Meeting of Shareholders.
- » The majority of directors elected for a specific period must comply with the criteria to be considered independent members, and must declare this to be the case.

Functions of the Board of Directors

(102-26) It is a function of the Board of Directors to establish the Company's policies on economic, social and environmental matters; approve investment plans and set rules and regulations for the Organization and the operation of all its departments; make proposals and carry out activities taking into account best practices in sustainability; monitor and follow up the Company's plans and management on this matter; approve, guide and review the strategy and main projects; approve the Risk Management Policy; and approve the budget and business plan.

(102-29) Another of its main responsibilities is to assess and approve the general risk management guidelines proposed by the Company's management, primarily aimed at identifying, assessing and analyzing the different factors that may affect achievement of the strategic objectives. Considering the above, the Board regularly reviews the design and operation of the Internal Control System, ensuring it meets the needs for prevention, mitigation and control of the risks to which the Company is exposed.

(102-30) To carry out the functions related to supervision of the Internal Control System, through the Audit, Finance and Risk Committee, the Board of Directors assesses the effectiveness

and efficiency of the controls adopted, as well as the Risk Management System, to ensure that the recommendations issued by the auditors are implemented and to monitor the identification and management of the Organization's main risks, starting with its new strategy. See breakdown in the Risk Management chapter.

(102-25) The Board also has the task of identifying, managing and analyzing the resolution of conflicts of interest that involve Company managers, provided that these functions are not attributed to the General Meeting of Shareholders, according to the Company Bylaws and the Law.

(102-21, 102-33) In turn, through stakeholder engagement media, we also find an opportunity to get to know the stakeholders' concerns and expectations, which allows Management to identify risk exposure situations or needs that arise from carrying out its business activities. The stakeholder engagement mechanisms include social work activities, ongoing customer service for investors, the Transparency hotline, and disclosing information through the website and corporate media. Management provides feedback to the Board of Directors on the issues reported through the described mechanisms and the way in which they have been resolved.

(102-31, 102-34)

Board of Directors Meetings

The Board of Directors approves its meeting schedule; the aim of which is to establish the frequency and time of meetings, as well as key topics in economic, environmental and social aspects, and other strategic topics for the Company.

The Board met on 14 occasions in 2018 and the main topics discussed were:

- » Financial Results
- » Budget
- » Strategy
- » Traditional Businesses
- » New Businesses
- » Sustainability
- » Innovation
- » Structure, People, Development and Culture
- » Opportunities for Growth and Expansion
- » Restructuring of Operations in Colombia
- » Risks
- » Regulatory Affairs
- » Project Monitoring

(102-35, 102-36, 102-37)

Remuneration of the Board of Directors

The General Meeting of Shareholders is responsible for setting the remuneration of this governing body, for which it takes into account its structure, obligations and responsibilities, as well as its members' personal and professional qualities, experience and time dedicated to the activity.

In 2018, the General Meeting of Shareholders approved monthly professional fees of COP 6,250,000 per Board meeting, and COP 6,250,000 per Board committee meeting for the term from April 2018 to March 2019. No variable compensation has been established.

The people employed by Grupo Argos S.A., namely Jorge Mario Velásquez and Alejandro Piedrahíta, do not receive remuneration for their participation in the Board committees.

(102-27, 102-28) Training and Assessment of the Board of Directors

The Company promotes training of Board members to increase their knowledge of the Organization's new projects and, therefore,




facilitate their participation in meetings and decision-making. The following activities were carried out in 2018:

- » Update on regulatory issues that have an impact on the Organization, especially in the distribution business.
- » Electricity situation of the Caribbean region.

The Board of Directors is evaluated by an external and independent expert once during the term for which it was elected. The year in which this method is not used, a

management self-assessment is carried out. At the beginning of 2017, these results were received and presented to the Sustainability and Corporate Governance Committee. The self-assessment was conducted with the support of AT Kearney, an independent consulting firm with ample knowledge on corporate governance that has been supporting our Board evaluation and self-assessment processes since 2012.

 To consult the results of this evaluation, please [click here](#).



(102-20) **Steering Committee**

The executive-level roles that are directly related to economic, environmental and social issues are, respectively, Financial Manager (economic), Generation Manager (environmental and social), Transmission and Distribution Manager (environmental and social), Human Resources, Administrative and Technology Manager (social), and Corporate Affairs Manager (social and sustainability).

**RICARDO
SIERRA F.**
CEO

“Consolidate
Celsia’s culture.”



**JAVIER
GUTIÉRREZ A.**
Central America

“Establish 20 MW in
distributed generation
in Panama, Honduras
and Costa Rica
through our human
talent and culture with
zero incapacitating
incidents.”



**JULIÁN
CADAVID V.**
Transmission and
Distribution

“To make our current
and potential clients see
Celsia as a company
that gives them
comprehensive, latest-
technology solutions at
an efficient cost.”



**ESTEBAN
PIEDRAHÍTA M.**
Finance and Business
Development

“Strengthen profitable
growth so that good
energy reaches new
horizons.”



**MARCELO
ÁLVAREZ R.**
Generation

“Start to build
our new wind
power projects
with our best
energy.”



**SANTIAGO
ARANGO T.**
Corporate Affairs

“Provide exceptional
support for corporate
and business decisions that
make the new era for energy
a reality.”



**MARÍA MERCEDES
AGUILAR V.**
Steering Committee
Support

“Establish our projects,
vibrating from Celsia’s
culture to make
everything we have
dreamed a reality.”



**LUIS FELIPE
VÉLEZ R.**
Sales and Marketing

“Mature the portfolio of
new energy products
and consolidate the
sales team.”



**JUAN MANUEL
ALZATE V.**
Innovation

“Use data intelligence to
accelerate the Company’s
growth and to contribute
to the launch of electric
transit.”



CLAUDIA SALAZAR P.
Human Resources,
Administration and Technology

“Attract and develop the best human
talent in a positive, collaborative,
safe and innovative environment,
using disruptive technology.”



MAURICIO LLANOS B.
Regulation

“Support growth with the
long-term consolidation of the
energy market and clear rules
for our remunerated decrease
of the demand.”



Our Management

In December, the Board of Directors approved the amendment of the Company's Accounting Policy to adopt the new regulation on the subject, with the prior approval of the Audit, Finance and Risk Committee.

Additionally, it approved the amendment of the Code of Business Conduct, mainly regarding: (i) the role of Senior Management and managers in areas of business conduct; (ii) respect and promotion of human rights; (iii) joint investments between employees; (iv) personal relationships between employees; (v) protection of the companies' image; (vi) relations with the authorities; and (vii) creation of the Central Conduct Committee.

The guidelines defined for relationships with related parties are established in the Company Bylaws.

 To consult the Company Bylaws, please [click here](#).

2018 Milestones

- » We amended our Code of Business Conduct to improve standards on the issue.
- » For the sixth year in a row, we received recognition as IR Issuers from the Colombian Stock Exchange for voluntarily adopting best practices in terms of information disclosure and investor relations.



Where Are We Heading?

Short Term (0 to 2 years)

- » Prepare a policy that formalizes the guidelines for relations with public officials.
- » Define the Corporate Governance Code for operations in Central America.
- » Amend the Corporate Governance Code to adapt it to the Company's new reality.

Medium Term (3 to 5 years)

- » Constantly review our policies and codes in order to keep them up-to-date and

in line with best practices in corporate governance and Law.

Long Term (6 or more years)

- » Keep monitoring national and international corporate governance trends that generate value for our shareholders and other stakeholders.

BUSINESS CODE OF CONDUCT



 GRUPO ARGOS

 ARGOS

 CELSIA

 ODINSA

 SUMMA

 To consult our Code of Business Conduct, please [click here](#).

Ethics and Transparency



How does ethical and transparent conduct strengthen our work relationships?



“When we act coherently and base our decisions on ethics and transparency, in line with our pillars, policies, codes and agreements, among other standards, we generate trust among all our stakeholders. This makes work relationships positive and sustainable.”

MARTHA ISABEL REINOSO
Quality of Life Manager, Celsia.

At Celsia, ethics and transparency are not negotiable. Our commitment to integrity is ongoing and, therefore, this principle is reflected in all actions with our stakeholders, because we are convinced that it is not possible to be sustainable without ethics or integrity.

We live by our principles on a daily basis, which we integrate into the Organization’s operations, processes and strategy. This way, we responsibly generate value for our business and our shareholders. Integrity is part of the seal of our new energy.

(102-16) The guidelines and rules on corporate governance, ethics, transparency, competition and anti-corruption are mainly in the Company Bylaws, in the Corporate Governance Code and Code of Business Conduct, and in some of the Company's policies, such as the policies on management of the risk of fraud, bribery and corruption and the policy on competition, which are publicly available on our website: www.celsia.com.




(102-17) Ethics Hotline

Through our Transparency hotline, people can personally or anonymously report wrongful acts or violations of the policies established in the Code of Business Conduct. This hotline is managed by an independent third party, and provides adequate discretion.

The Organization has **transparency hotlines in every country** where it operates:

- » **Colombia:** (+57) 018000123420.
- » **Panama:** (+507) 008002262591 and (+507) 8327907.
- » **Costa Rica:** (+506) 40001941.
- » The **email** is the same for all the countries: celsia@lineatransparencia.com.



For more information on the operation of the Transparency Hotline and statistics of the reports received, please [click here](#).



Our Management

In 2018, we implemented the Compliance Department, which manages risks of corruption, bribery, money laundering and financing of terrorism, undue use of personal information, fraud and anti-competitive behavior. These issues were previously managed independently by the legal, audit, safety and human resources departments. This enables the implementation of a stronger program and the definition of adequate and sufficient policies and procedures to ensure that the Company –including executives, employees, suppliers, clients and any other kind of third party with which we have trade relations– complies with the applicable regulatory framework to prevent risks related to compliance.

As part of the Corporate Ethics program, we continued the *Comprometidos* (Committed) campaign, with the main goal of strengthening the foundations of ethics, transparency and respect, encouraging employees to act correctly and inviting them to think before making a decision.

We participated in the *Acción Colectiva de Ética del Sector Eléctrico* (Collective Action for Ethics in the Electricity Sector), of which we have been a member for more than three

We updated the Organization's Competition Policy, responding to changes in the strategy and new businesses. The new policy was communicated to the key groups of employees.

years. This year, we highlight the creation of a map of money laundering and financing of terrorism risks in the sector, which was presented at the 6th Ethics Forum of the Electricity Sector in Colombia.

We updated the Organization's Competition Policy, responding to changes in the strategy and new businesses. This new policy and the manual that regulates it were communicated at in-person workshops to 293 key employees, who carry out functions that may be affected by this topic, and we also conducted assessments to confirm their comprehension of this training.

We implemented a due diligence procedure for knowledge and enrollment of third parties with which we interact in order to mitigate reputational, financial and operational risks.

(205-1) Out of Celsia's 31 operations, this year, we assessed 25 with respect to risks related to corruption (81% of operations).

The reviewed risks were mainly conflicts of interest, embezzlement of assets, unauthorized alteration of information and fraud.

(205-2) We carried out the *Comprometidos* course, aimed at 100% of our employees.

We focused on topics of preventing the risk of corruption, bribery, money laundering and financing of terrorism, undue use of personal information, fraud and anti-competitive behavior. The course was attended by 1,279 employees. Additionally, they carried out other activities within the *Comprometidos* ethics program, with coverage of the whole Organization.

Our Board members were trained on these topics through the course and at meetings of the committees that support the Board.

2018 Milestones

- » We implemented the role of Compliance Officer.
- » We trained, 949 contractors on topics of ethics, where we promoted the use of our Transparency hotline.
- » The *Comprometidos* course was completed by 1,279 employees, focused on topics of conduct and preventing risks of corruption, bribery, money laundering and financing of terrorism, fraud and anti-competitive behavior.
- » We amended our Code of Business Conduct to improve standards on the issue.
- » We carried out in-person workshops with 293 key employees who carry out functions that may be affected by issues of competition.



(102-27) Training of Members of the Board of Directors and Management

Members of Governing Bodies Informed and Trained	Total Board Members	2015	2016	2017	2018
Number of Board members who have been informed and trained on the Organization’s anti-corruption policies and procedures	7	7	6	7	5
Percentage (%) of Board members who have been informed and trained on the Organization’s anti-corruption policies and procedures		100%	86%	100%	71%

Employees Informed and Trained on the Organization’s Anti-corruption Policies and Procedures	2015		2016		2017		2018	
	Amount	%	Amount	%	Amount	%	Amount	%
Colombia	1,130	100%	1,271	100%	1,327	100%	1,410	100%
Central America	299	100%	286	100%	259	100%	252	100%
Total	1,429	1	1,557	100%	1,586	100%	1,662	100%

(205-3) No confirmed cases of corruption between employees or suppliers, nor legal lawsuits against the Company for corruption, fraud, violation of the Code of Business Conduct. money laundering, financing of terrorism, unfair competition or anti-competitive practices were reported in 2018.

(415-1) We participate in and are committed to democratic processes in Colombia. However, we did not make this kind of contribution in 2018.



Where Are We Heading?

Short Term (0 to 2 years)

- » Define the action plans and controls required for the most relevant risks that are identified regarding compliance.
- » Give continuity to the *Comprometidos* campaign and the training on issues of competition.
- » Keep progressing in the Collective Action commitments of the electricity sector.
- » Carry out an analysis of the Compliance program with an external firm.

Medium Term (3 to 5 years)

- » Update the risk matrix on corruption, bribery, fraud, and money laundering and terrorist financing.

Long Term (6 or more years)

- » Keep improving the *Comprometidos* corporate ethics program through the implementation of controls, policies, procedures or manuals, considering issues including the guidelines of our parent company.

Human Rights

For Celsia, understanding the regions where it operates is essential, not only to make its operations feasible, but also for the generation of value for its stakeholders. The whole interaction strategy is framed in respect and promotion of human rights, as we express in our policy.

Therefore, we work to increase our employees' knowledge of the topic, we identify potential human rights violations that may occur in our operations in the regions and we strive to design actions that enable us to mitigate the impact that we may generate inside and outside our operations.

Our Management

We have progressed in the implementation of our Human Rights Policy in the development of our operations through the following actions:

- » We developed an online course for our employees with the aim of reinforcing

their knowledge of the basic aspects, importance and incorporation of human rights into operations.


- » We adjusted the procedure for the acquisition of real estate rights, including the explicit duty to know the regions in which generation, transmission and distribution projects will be developed, and the implication on the acquisition of real estate and the Company imposing obligations. This enables us to create a regulatory framework to establish differential behavior and due diligence according to the features of the region and the population in which we intend to operate.
- » Through the management of our environmental management plans, we keep strengthening our programs to channel and process requests, claims and suggestions from the population in the area of influence. These become a tool for our stakeholders to communicate concerns or disagreements related to the operation of the project, including potential situations that compromise their human rights.
- » We actively participated in academic



and professional discussions on human rights issues in which the guidelines for action are established under the regulatory framework for the essential right to prior consultation in Colombia. Additionally, we discussed other matters of strategic interest for the Organization.

- » As part of social management prior to the start of the Porvenir II hydroelectric power plant project, we carried out the

Employees of our facilities in Yumbo, Valle del Cauca.


To consult the Human Rights Policy, please [click here.](#)



We carried out training and prevention workshops with the students at the Pedro Fermín Vargas educational institution.

following actions:

- We actively participated in the Transitional Justice Committees of San Luis, San Carlos and Puerto Nare (Antioquia), which have responsibilities including preparing the action plans as part of the development plans to achieve the care, assistance and comprehensive reparations of the victims of the armed conflict in these municipalities.
- We continued to coordinate with the Department for Comprehensive Action against Land Mines and with the 60th Humanitarian Demining Battalion, Colonel Gabino Gutiérrez, for the humanitarian demining process in the municipality of San Luis, Antioquia. In 2018, with Celsia's support, as well as the locations in the municipality's area of direct influence, it was possible to certify La Estrella town.

The goal is to certify the municipality as free from suspected landmines.

- Under the coordination of the Corporación Región, we collectively participated with another eight regional entities in the San Carlos program: Paths to Reconciliation. The aim of the program was to strengthen the processes of memory, reconciliation and peace-building carried out in the municipality of San Carlos, Antioquia, through the coordination and promotion of local initiatives of memory, reconciliation and peace that contribute to the reconstruction of the social fabric and appropriation of the land.
- » We trained and strengthened citizen skills related to land management of the leaders and oversight committees for the Calima and Amaime hydroelectric power plants, with

three specific approaches: a) essential right to citizen and community participation as a tool to guarantee human rights; b) creation of projects; and c) "resilient territories" risk management.

- » We trained and strengthened citizen skills among the residents of San Luis, Antioquia; Barranquilla, Atlántico; Dagua, El Cerrito, Restrepo, Calima El Darién and Buenaventura, Valle del Cauca; Barrancabermeja, Santander; and Suárez, Cauca; through educational processes on leadership, community strengthening, human rights, community project management, social monitoring, negotiation and conflict resolution strategies, environment, tourism, participation mechanisms, risk management, interaction with communities and transfers of the electricity sector.
- » We held training workshops at the schools in the areas of influence of the Alto and Bajo Anchicayá power plants, Valle del Cauca, on children's and women's rights, and prevention of child abuse, violence against women and domestic violence, among other topics.
- » We fostered opportunities for training and raising the awareness of public forces in the areas of influence of our hydroelectric power plants on: human rights; International Humanitarian Law; the right to work, health and education; prevention of gender violence; peaceful conflict resolution; and a culture of peace.

Regulation

Our management with the authorities of the electricity sector in each country, directly and through the professional associations, is aimed at promoting technical proposals that make a positive contribution to strengthening the energy markets' regulatory frameworks, increasing their efficiency and competitiveness, and adequately incorporating the latest technology trends.

Therefore, we aim to present the authorities with alternatives to facilitate the necessary conditions in the markets in which we participate for the Company to manage the operational and systemic risks related to the electricity supply in the countries where we operate, either in an environment of competition or regulation. Additionally, we promote the adoption of regulatory frameworks that open up the way for innovation, so that through new business models, we can exceed our clients' expectations.

Our Management

In 2018, we actively participated in the creation of proposals to contribute to the transformation of the energy service and to ensure the sustainability of the electricity sectors in the countries where we operate.

In Colombia, we made suggestions on the government initiative to implement auctions for the purchase of renewable non-conventional energy in the long term. The first auction was carried out at the beginning of 2019 and we have



Electricity pylons in Valle del Cauca.

insisted on said mechanism ensuring a high level of competition and its coordination with other initiatives studied by the Energy and Gas Regulatory Commission (CREG, in Spanish).

We also participated in the adjustments introduced by the CREG to the reliability charge system, which aims to ensure response to the demand. Based on these, firm energy obligations were assigned to the existing power plants until November 2022.

Regarding distribution activity, in September, Epsa and Cetsa submitted their income applications and investment, quality

and loss recovery plans for the next five years. Investments will amount to COP 700,000 million in the period, and this will enable us to upgrade our networks to integrate smart metering, distributed generation and the prosumers in the market.

2018 Milestones

- » Based on CREG Resolution 015/2018, we presented a five-year investment plan that remunerates the necessary assets to progress with the goal to keep being the best in service quality, with a modern distribution system that integrates new technology.
- » For the power plants, we achieved the allocation of firm energy for the next four years.



In terms of new businesses, with the CREG, we promoted the implementation of Remunerated Disconnection of the Demand systems on the spot market and we worked to converge the energy and telecommunications services to empower new developments in the implementation of the advanced metering infrastructure (AMI), response to the demand and automation of the network.

In Panama, on September 5, 2018, the National Public Utilities Authority (ASEP, in Spanish) submitted Public Survey 012-18 in which it proposed to amend the rules for the purchase of energy on the wholesale market. We actively participated in said inquiry, aiming for its amendments to strengthen competition in contracting processes and formation of efficient prices.



Where Are We Heading?

Short Term (0 to 2 years)

- » Drive the transformation of the energy market with the implementation of intraday markets, to efficiently and sustainably integrate generation using non-conventional renewable energy sources.
- » Work on the creation of a competitive contracting market in the long term for new and existing power plants that enables risk management by the generators and resellers.
- » Support government initiatives to accelerate the implementation of smart metering and the development of new services, such as efficient consumption management and Remunerated Disconnection of Demand.
- » Promote the competitiveness of our market based on the participation of a greater number of companies and an environment supported by self-regulation.

Medium Term (3 to 5 years)

- » Work for electric transit to be an option for our cities, facilitating the replacement of diesel buses with electric buses in the massive transportation systems.
- » Together with the professional associations, lead proposals to promote sustainable and competitive growth of the electricity supply, integration of non-conventional, renewable energy sources, both at the distributed level and on a large scale, and a flexible framework that enables the development of new business models for the benefit of our clients.
- » Strengthen the development of our BHAG, focused on the City, Business and Home units, through the transformation of the distribution systems.

Long Term (6 or more years)

- » Actively participate in the digitalization of the energy service and in the upgrade of distribution, to be a bridge for consumers, prosumers, demand aggregators and resellers of energy.
- » Drive the acceleration of energy storage as an option to strengthen the electrical grid in light of the beginning of generation based on non-conventional renewable sources.
- » Present proposals to take advantage of storage at the distributed level, which poses a great challenge to flexibility and the potential that the prosumers will acquire.

Risk Management

Risk management is a necessary tool to obtain reasonable assurance in the achievement of the Company's goals. This enables us to plan in advance the events that could significantly affect us and to be prepared to mitigate their impact, reducing the uncertainty in decision making. Similarly, it means we can identify the opportunities to be strengthened and managed. As a guide, we have the guidelines defined in the Risk Policy and in the Corporate Risk Manual.

In 2018, we worked to be an organization that, in addition to managing risks and opportunities, has the ability to identify global trends that can influence our business and create value from them.

Our Management

Enterprise Risk Management System

The aim of the ongoing identification, measurement, treatment and monitoring of the risks to which we are exposed is to quickly and proactively assess the positive and negative impacts that may affect the achievement of the strategic objectives and the performance of the business.

The Enterprise Risk Management System (ERMS) has the approach of identifying the most relevant risks in the strategy, processes and projects, responding to their possible incidence and the critical level of their impact on our goals.

The system is based on four pillars:



Employee of the Bajo Anchicayá hydroelectric power plant, Valle del Cauca.



Governance Structure

102-29 Risk management at Celsia has the following governance structure. Its responsibilities and functions are defined in our Risk Policy.

The Risk Department leads the implementation of the Risk Management System across all of the Organization’s processes



Board of Directors

- » Ensure implementation of the ERMS
- » Approve the policy
- » Approve the risk appetite



CEO

- » Respond to the Board of Directors and shareholders for the implementation of the ERMS
- » Report on the risk profile
- » Report on the status of the risk management plans



Steering Committee

- » Report on the operation of the ERMS in the processes
- » Warn about new risks identified



Risk Managers

- » Create and update the risk maps and controls of their processes
- » Provide support for training and spreading of the risk culture



Audit, Finance and Risk Committee

- » Support the Board of Directors in all the responsibilities related to supervision of the ERMS
- » Monitor the risk map



Employees

- » Apply comprehensive risk management according to the policy and methodology
- » Warn about possible risks in their processes
- » Report risk events



Risk Department

- » Design and lead the implementation of the Risk Policy, processes and methodology
- » Monitor effective risk management
- » Implement the risk management methodology and support the processes



Internal Audit

- » Assess the efficiency and effectiveness of the ERMS
- » Issue recommendations to improve the operation of the ERMS
- » Monitor the risk mitigation plans
- » Assess the operation of controls



Method

Our method for enterprise risk management is aligned with international practices, such as the ISO 31000 standard and the COSO ERM standard. The starting point is to understand the business context, objectives and environment. Subsequently, the relevant risks are identified and analyzed, the current mitigation controls are associated, the risk is assessed and finally, its treatment is established. This process is complemented with ongoing communication and monitoring activities to ensure continuous development. The method is applicable to strategic risks, processes, projects, new businesses and products.

The analysis of each risk is addressed from different kinds of impact, aiming to cover the strategic variables and stakeholders. The perspectives used are:

- » Financial
- » Share Value
- » Reputational
- » Environmental
- » Social
- » Operational
- » Regulatory
- » Human Resources
- » Human Rights

Culture

We constantly work to encourage and strengthen education on risks so that this becomes an essential part of the Organization. The example of our managers and good communication are essential to achieve this goal.

Technology

In 2018, we completed the implementation of the Governance Portal tool, which provides a systemic approach for risk management. As part of this process, we configured the system, we trained the users and we uploaded the information on the strategic risks and processes with the respective action plans to mitigate them.

Main Risks

We conducted interdisciplinary work to identify and assess the strategic risks. Below, we present their description, impact and action plans.





(102-15)Risks

Strategic Risk	Description	Potential Impact on Business	Mitigation Actions
Human Talent and Culture	Impact on the achievement of the strategy due to the human resources that do not suit the capabilities and culture required by the Organization.	Reputational/Financial	Preparation and monitoring of the performance evaluations. Definition of development plans that increase leadership capacity.
Regulatory	Changes in regulation that adversely affect the operation of the assets and the delivery of products and services.	Financial	Work with professional associations to address the CREG, ministries and Colombian government to review the proposals for change.
Political	Probability that political forces generate radical changes that could affect the business.	Financial	Management with government bodies.
Technology	Not having the information technology required to leverage the operation and growth of the business.	Financial	Update and upgrade of the technologies that support the business. Progressive integration of the different IT platforms.
Environmental	Effects on the environment in the areas of influence resulting from operations.	Environmental/Financial/Reputational	Definition and execution of environmental management plans.
Projects	Cost overrun or increase in the projects' execution times, or impossibility of its development.	Reputational/Financial	Proactive management with the communities and authorities. Adequate selection of suppliers, validating their experience and financial stability.
Commercial	Failures in the business model of new products that involve the loss of clients.	Reputational/Financial	Training of in-house staff, hiring experts.
Fuel	Changes in the availability and price of fuels that make the assets unfeasible.	Financial	Strengthening of the infrastructure required to operate with different fuels, supported by adequate maintenance and hiring systems.



Strategic Risk	Description	Potential Impact on Business	Mitigation Actions
Obsolescence of Assets	Loss of competitiveness due to obsolescence of assets	Reputational/Financial	Maintenance and replacement plans for production assets.
Cybersecurity	Cyber-attacks or faults that put at risk the provision of services or delivery of products.	Reputational/Financial	Implementation of tools to detect events promptly and with the capacity to remotely isolate the compromised operations.
Demand	Decrease in the energy demand due to the entry of new technology or changes in consumer patterns.	Financial	Assessment of the generation portfolio and the effect of the energy price on sales contracts.
Financial	Inadequate financial structure to support the business, new projects and economic resources for growth.	Financial	Improvement of the financial assessment of the business cases and new businesses. Adequate counterparty risk management.
Acquisitions	Errors and omissions in partnerships, mergers or acquisitions and structuring of projects.	Reputational/Financial	Formation of interdisciplinary teams responsible for carrying out the processes of mergers and acquisitions (M&A). Participation of specialized teams.
Supply and Distribution Chain	Failures in the process of supplying and delivering products and services that affect consumers.	Reputational/Financial	Implementation of a new supply model and subsequent monitoring.
Competitors	Reaction of the competitors to the new businesses and products, and the entry of new competitors that damage business performance.	Financial	Positioning of the business and contractual models in light of the other competitors.
Energy Portfolio	Inadequate structuring of the energy portfolio that reduces the Company's competitiveness.	Financial	Correction of the shortage price and regasification plant. Renewal of gas purchase options contracts.
Social	Production assets or projects becoming unfeasible due to problems related to communities.	Social/Reputational/Financial	Strengthening of relations with the different stakeholders of the area.
Reputation	Situations that expose the prestige and credibility of the Company for stakeholders.	Reputational/Financial	Prior and aware assessment of the actions that the Organization intends to carry out. Commitment to good practices and actions, and compliance with the Corporate Governance Code and Code of Business Conduct.

There were no significant changes to the risk matrix in 2018. However, we identified emerging risks, which are ones that result from a new identification or major exposure that was not forecast.



Emerging Risk	Description	Potential Impact on Business	Mitigation Actions
Change in Electricity Consumer Patterns	The electricity industry is changing rapidly, due to clients’ new requirements, which with the capacity to form groups and influence, are demanding innovative, efficient and environmentally-friendly products. Clients that are close to the centers of consumption and that behave as producers and consumers at the same time. The most important changes are becoming evident in distributed electric power generation, particularly in self-generation with solar panel roofs. Clients become consumers and energy producers at the same time, with the figure of the “prosumer” emerging. Its self-generation is enough for consumption and for sale of the surplus. This situation can potentially reduce the income of public utility companies, threatening the traditional business. The trend to increase energy storage technology is also evident, which enables clients to store their generation surpluses to use when they require.	Reduction in the revenue of electric power generation and sales businesses, especially in the industry and home segments.	Strengthening of sales skills, constant innovation, market intelligence and technological oversight. We are specifically turning this risk into an opportunity, driving solar power generation in roofs through a business scheme where we install the solar power generation system on the clients’ property to sell them the electricity at lower prices than conventional energy. To date, we have 31 roofs installed with a total capacity of 6.7 MW.
Smart Cities	Trend of building smart cities with an integrative vision in order to connect people, information and its elements through technology. These cities demand high-quality, sustainable public utilities that respect non-renewable natural resources and provide a friendly service. Under this concept, companies of different economic sectors (communications, technology, software and public utilities) start to compete to provide services with disruptive business models. If the Company does not adapt its capacity to provide the required services, it may be excluded or limited to a traditional role without the possibility for growth. Distributed generation and energy storage may be the components that become most widespread in smart cities, activities that can potentially reduce the demand and cause a loss of clients.	Reduction of the revenue for the energy generation and sales business due to a reduction in demand and the clients served in the City, Business and Home units.	The Company adapted its commercial structure to meet the cities’ requirements through a specific area for this, creating innovative responses of products and services. We are a partner of Serena del Mar, the dream city proposal in Cartagena, where we are supplying public utilities and other products that ensure comfort, well-being and quality of life: electricity, sewage and drainage, waste disposal, telecommunications and cooling districts. In line with the sustainability principles, the hospital and corporate center have solar energy.

Emergency and Disaster Management

As part of the policies for risk mitigation, we started to implement the emergency and disaster response plans to reduce the risk conditions in our facilities that could cause damages or losses for our stakeholders. Therefore, we comply with Law 1523/2012 and Regulatory Decree 2157/2017: Disaster Risk Management.

Additionally, we developed plans for the Salvajina hydroelectric power plant and the Pance substation.

Crisis Management Plan

This plan coordinates the Company's different areas to respond to adverse events that threaten operations, people, the strategy, reputation and business continuity. The plan describes the guidelines to coordinate efforts, so that decisions are made based on analysis of the events; the response is organized; and the roles and responsibilities are clear, with the aim to reduce the negative impact that the event could have and to protect our reputation.

Business Continuity Plan

We identified the need to have the Business Continuity Plan to ensure the availability and continuity of critical operations in light of possible interruptions, whether planned or not. Therefore, we defined the method and selected the interdisciplinary team to implement the plan in Colombia in 2019. For operations in Central America, it will be projected for 2020.

Our Management

- » With our leaders, we carried out the *Hablemos de Riesgos* (Let's Talk about Risks) event, an activity in which we work on real cases of the sector and share experiences with different stakeholders.
- » We raised our employees' awareness about cyber risk and its potential impact on the Company. We carried out simulations of attacks to detect the users' behavior in light of possible events and we put social engineering and hacking concepts into practice. These aspects gave an innovative character to the Company. Additionally, we created an online course, which



Salvajina hydroelectric power plant, Cauca.

- has been approved by 36% of our employees to date.
- » We strengthened the technology pillar with the implementation of 100% of the *Protiviti* governance portal, which enabled the recording of strategic and operational risks, as well as management and control of them. This tool also enables the recording and monitoring of the action plans to mitigate the risk. Currently, 90% of the processes have their action plans migrated to this platform. We hope that in the first quarter of 2019, 100% of the

processes will have their action plans registered in the tool.

- » We carried out five risk identification and assessment workshops in Central America with the participation of 47 employees.
- » We progressed in the quantitative strategic risk assessment exercise, as well as the demand and regulatory risk assessment, using the value at risk (VaR) concept, which enables us to have more reliable economic models.



What benefit does the Company obtain from establishing the Enterprise Risk Management System?



“Risk management is essential for the management of our generation assets, because it allows us to assess and take preventive action to maintain the safety of people and the environment, and to ensure business continuity.

The knowledge transfer provided by international risk advisors has been very enriching for our team, because it has enabled us to compare our practices with global standards.”

CARLOS ALBERTO MANTILLA

Hydroelectric Power Plant Technical Manager at Celsia.



Employees of the Medellín offices, Antioquia (Colombia)

2018 Milestones

- » We carried out 13 risk identification and assessment workshops on processes, projects and new businesses.
- » We trained 100% of the risk managers on the *Protiviti* governance portal tool.



Where Are We Heading?

Short Term (0 to 2 years)

- » Keep implementing the emergency and disaster response plans in the Organization’s other power plants and facilities within the scope of the law and regulatory decree.
- » Validate the effectiveness of the Crisis Management Plan through the execution of drills.

- » Monitor the fulfillment of the action plans to mitigate risk using the IT platform.
- » Continue the quantitative assessment analysis for relevant operational and strategic risks.

Medium Term (3 to 5 years)

- » Implement the Business Continuity Plan for the whole Organization.

Long Term (6 or more years)

- » Lead the Organization toward an approach of trend management and improvement of risk management models.



Sustainable Supply Chain

Supplier management enables us to mitigate risks and maximize opportunities in our supply chain. We focus on inclusion and on strengthening our relations with suppliers throughout their lifecycle, and strive to always be quick and reliable.

This year, we will keep working on master data management, on the pre-qualification and segmentation of suppliers, on performance evaluation, on relations meetings and visits, on monitoring and feedback on the assessment, and on the development of this group of stakeholders. This is with the aim for them to keep being great partners in our value chain, because they are important participants throughout information management, in compliance with the policies and guidelines, in knowledge and in the application of technical, environmental and health and safety regulation.



How does Celsia contribute to your company's growth and development?

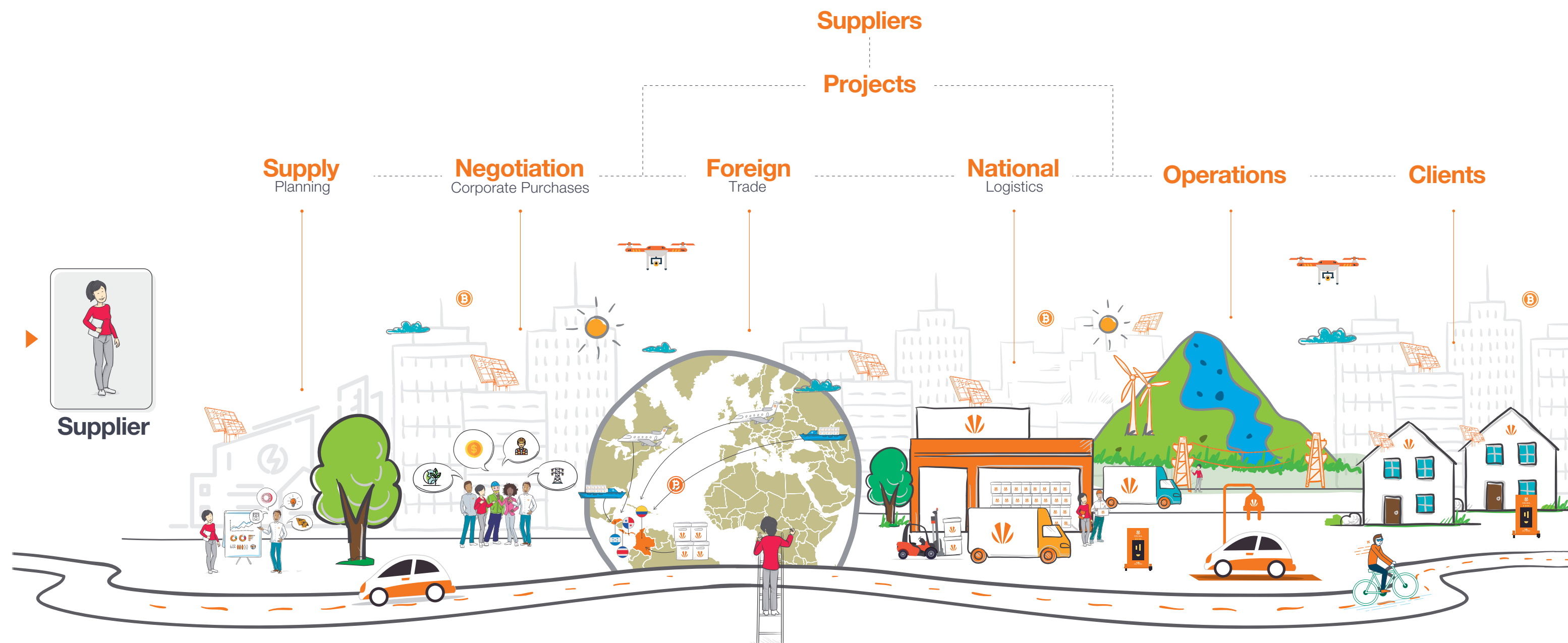


“Inelma Limitada is a 29-year-old family company in the construction sector of civil works, engineering and other technical consultancy activities. Our achievements and good reputation as a company that provides high-quality services with competent personnel committed to safety have largely been thanks to Celsia and its growth initiatives for its suppliers, through which we have strengthened the processes of our mission.”

ANA MILENA CASTILLO DÍEZ
Registered Agent and General Manager, Inelma Limitada.



(102-9) Description of the Supply Chain





Our Management

In 2018, we had hired 2,603 suppliers. For classification by type of supplier, we took into account the volume of purchases of goods and services, classifying them according to the type of purchase that represented the largest percentage.

Most of our suppliers, 1,933, are in Colombia. This is followed by Panama with 362; Costa Rica with 76; the USA with 70; Germany with 15; Spain with 14; Honduras, Brazil and Mexico with ten each; Canada, Italy and the United Kingdom with seven each; Switzerland with five; China with four; Uruguay with three; Argentina, Austria, Chile, France, Ireland, Puerto Rico and the Czech Republic with two each; and Slovakia, Norway, Portugal, Sweden and Trinidad and Tobago with one each.

(204-1) Purchases from Local Suppliers

It is very important for us to contribute to the growth of local suppliers and encourage the development of the economy in every country where we operate. Therefore, out of the total purchases made in both regions during 2018, 80.7% were from local suppliers.

You can consult the breakdown of our Sustainable Supply indicators in the Appendices section on p. 181



(102-7) Type of Supplier	2017			2018		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Services	1,805	313	2,118	1,563	412	1,975
Goods	503	138	641	499	129	628
Total	2,308	451	2,759	2,062	541	2,603

(204-1) Purchases from Local Suppliers	2017						2018					
	Colombia		Central America		Celsia Total		Colombia		Central America		Celsia Total	
	COP (Millions)	USD	COP (Millions)	USD	COP (Millions)	USD	COP (Millions)	USD	COP (Millions)	USD	COP (Millions)	USD
Purchases of goods and services	746,939	250,314,806	106,459	35,676,608	853,398	285,991,414	721,653	244,096,102	136,812	46,276,177	858,465	290,372,279
Purchases from local suppliers	670,347	224,647,235	86,552	29,005,311	756,899	253,652,546	602,856	203,913,453	90,087	30,471,639	692,943	234,385,093
Total	89.7%	89.7%	81.3%	81.3%	88.7%	88.7%	83.5%	83.5%	65.8%	65.8%	80.7%	80.7%



- » We standardized the operation of the IProveedor tool for Central America.
- » For the second year in a row, we carried out the Supplier Satisfaction survey. We obtained a score of 86.2% in the satisfaction question, positively highlighting Celsia’s culture with respect to innovation and good energy.
- » We carried out sessions to raise awareness with eight individual suppliers of the food and drink, and laundry segments, for which we provided talks on topics of occupational health and safety, good manufacturing practices, and legal, accounting and tax matters.
- » We talked to 22 suppliers from Costa Rica so that they closely know Celsia, the importance of sustainability in our management, our supply process and the initiatives we are interested in developing with them.
- » We strengthened the monitoring of the suppliers’ action plans resulting from the performance evaluations, with 60% fulfillment of the proposed actions.
- » We started the Risk-Based Supplier Segmentation project. The pilot project included 152 suppliers from all the segments and categories (individuals, SMEs and large companies) with which we want to identify the possible risks that could have an impact on our value chain, with the aim to analyze them, assess them and intervene in them with different action plans.
- » We posted three online newsletters with relevant information for our suppliers.

- » We started the first meetings with potential consultants, who can provide the service of methodology and implementation to develop three areas of suppliers in which we want to intervene: solar power, areas of influence and other.
- » We applied management mechanisms to comply with best practices through our Suppliers Code of Conduct, Contractor Manual, Supply Chain Guidelines, and areas for supplier relations and monitoring and control by the contract manager, as the main participant in the whole contract cycle.
- » We documented the supplier assessment through a practical and easy-to-use tool for the managers.

Supplier Assessment

(308-1) Suppliers Assessed with Environmental Criteria

In 2018, we carried out the supplier assessment for 2017. In this assessment, we had a significant increase in the number of suppliers assessed with environmental criteria. The results showed an increase of 20% in Colombia, from 279 in 2017 to 335 in 2018; and of 26% in Central America, from 93 in 2017 to 117 in 2018. To achieve this target, we had the participation of 253 contract managers for the two regions.

(308-2) Negative Environmental Impacts on the Supply Chain and Measures Taken

The points assessed in which we identified opportunities for improvement in environmental topics were: compliance with legal requirements and environmental incidents. We found that in Colombia, 17 of our suppliers had a negative impact and in Central America, there were eight. From these 25 suppliers, we received ten action plans to close gaps, being effective in the regular monitoring of eight of them. The two remaining suppliers correspond to contracts that have already expired.

(414-1) Suppliers Assessed with Social Criteria

For 2018, we set the goal of strengthening processes related to occupational health and safety. Therefore, we extended the *Yo elijo cuidarme* (I Choose to Look after Myself) program to suppliers who are at greater risk for service provision. We broke down the types of service into three waves for implementation: 1. Services related to the business purpose; 2. Services that pose risks and are not on our facilities; and 3. Other services.

Therefore, all the suppliers that provided services in 2017 of wave 1 were assessed with social and work criteria, which increased the suppliers assessed on said criteria by 134%, from 61 to 139 in Colombia and from 15 to 39 in Central America.



(414-2) Negative Social Impacts on the Supply Chain and Measures Taken

The points assessed in which we identified opportunities for improvement in social topics were: payment of salaries and social security, occupational health and safety management system and monitoring of indicators.

Out of the suppliers that we assessed, we found that 15 of them had a negative impact in Colombia and seven in Central America, and action plans were established for all of them. Additionally, we made relations visits, together with the areas responsible for occupational health and safety and contractor management, to ensure compliance and monitoring of the improvement activities, and we regularly reviewed the different contractors. These procedures are essential when making decisions about the continuity of the contractual relationship in the future.



Meeting with suppliers from Costa Rica.

2018 Milestones

- » We made an accumulated annual saving of COP 32,000 million as a result of the negotiation processes, records, the budgeted value and the base supply prices.
- » We increased the number of strategic suppliers assessed by 21%.
- » We assessed 118 contractors on their occupational health and safety approach through the *Yo elijo cuidarme* (I Choose to Look after Myself) program.
- » We improved the monitoring of our suppliers, increasing from 14 relations visits in 2017 to 29 visits in 2018.



Where Are We Heading?

Short Term (0 to 2 years)

- » Improve the management of stores and the supply chain.
- » Build, implement, disclose and manage supplier segmentation.
- » Hold the first supplier acknowledgment event.
- » Increase the assessment database of suppliers associated with critical categories by 20%.
- » Define the needs of our local suppliers in order to establish a development strategy.
- » Validate the suppliers identified with an impact on the carbon footprint in order to train them so that they can start mitigation activities.

Medium Term (3 to 5 years)

- » Train our suppliers from the different waves of the *Yo elijo cuidarme* (I Choose to Look after Myself) program.
- » Implement a tool for supplier management throughout their lifecycle.
- » Equip and secure connectivity models with our suppliers.
- » Carry out the digital transformation project for the supply chain.

Long Term (6 or more years)

- » Leverage new businesses through sustainable supply models.
- » Manage the supply chain, including all levels of suppliers.
- » Have suppliers-investors that are an integral part of the business.

05

Our Business

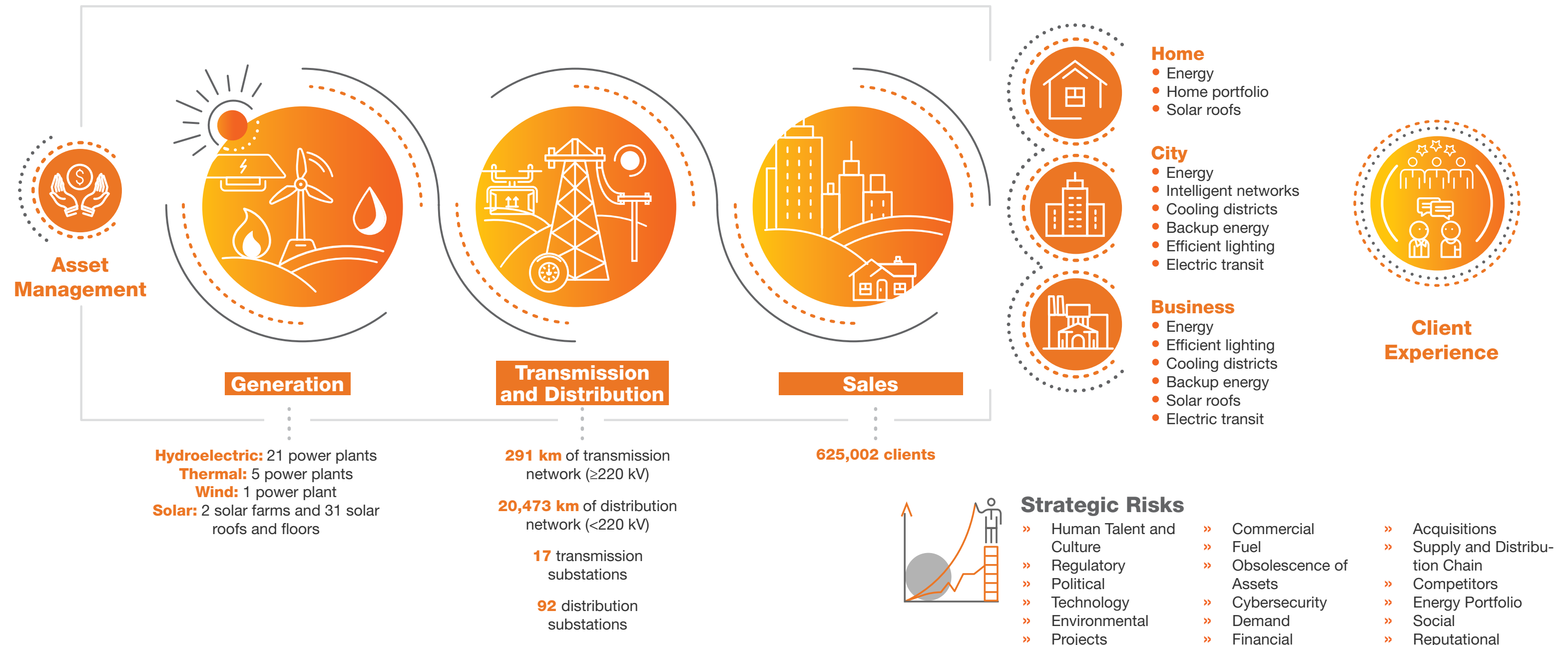


Panama City

CARRIL EXCLUSIVO
BUSES
POLICIAS
BOMBEROS
AMBULANCIAS
TAXIS

Business Model

Projects + Innovation + Culture and Talent + Socio-Environmental Management



The BHAG started to fly!

There is no doubt that these years have been a very demanding and above all, challenging journey. Since 2007, when we started to focus investments on the energy business, we have taken important steps to become significant players in the sector.

With Celsia, the name we established to position ourselves as a Multi-Latin energy company, we set our Big Hairy Audacious Goal (BHAG) for 2025. A couple of years ago, it seemed very ambitious and now we see it with the conviction that it is possible to achieve.



New distribution networks in the Caracolí project, Barranquilla. Plan5Caribe.

2015
Consolidated Revenue
0.8
trillion
556 thousand
clients
3 countries
1 segment

2018
Consolidated Revenue
USD **1.1**
trillion
625 thousand
clients
4 countries
4 segments

2025
Consolidated Revenue
USD **5.0**
trillion
1 million
clients
6 countries

➔ **REVENUE**
makes positive progress. The transmission and distribution projects developed with the Colombian government and the revenue from the portfolio of new businesses comprise additional income. This, added to the regular revenue in the generation, T&D and sales businesses, will bring us closer to the expected revenue BHAG.

➔ **CLIENTS**
With the acquisition of Epsa in 2009, we started serving 410,000 clients in Valle del Cauca. Nine years later, we are serving more than 625,000, 52% growth in the regulated market, non-regulated market and new businesses clients. We highlight the entry to the large clients market in Panama in 2018.

➔ **COUNTRIES**
In 2014, we arrived in Panama and Costa Rica, where we now operate three hydroelectric power plants, two thermal power plants, one wind power plant and one solar farm. In 2018, we entered our fourth country, with the incorporation of a company for the development of projects in Honduras. Our first project in the country, a 10-MW solar power plant, is already underway.

➔ **SEGMENTS**
Our innovative portfolio is focused on energy efficiency, which contributes sustainability to the **City** segment, productivity to the **Business** segment and better quality of life to the **Home** segment. The fourth segment is **Asset Management**. Currently, we have a generation capacity of 2,398 MW through 29 hydroelectric, thermal, solar and wind power plants, which generate approximately 6,516 GWh a year. We have 109 substations, 20,781 km of distribution networks and 291 km of transmission networks.

Our Understanding of Sustainability: Celsia PermaneC

In 2018, we set the goal of having a mutual understanding of sustainability. Therefore, we acknowledge that our actions and behavior are part of sustainable practices.

Building on benchmarks analysis and strategic dialogues that involved different teams of the Company, we came to the conclusion that in the Company, we experience sustainability through our actions and that the latter is implicitly present in the BHAG and in the pillars of our culture.

Our sustainability mindset is mainly reflected by:

- » Active focus on culture and innovation
- » The decision to constantly challenge the business model
- » Execution of projects beyond compliance
- » Diversification of the portfolio
- » Ethical and transparent behavior of our managers and employees



Celsia PermaneC

At Celsia, we look ahead to manage the risks and turn them into opportunities. We do this through disruptive and coherent thinking that materializes our culture. This enables us to evolve to be sustainable.



Human Talent

The best practices we promote consolidate an outstanding, committed and comprehensive team both personally and professionally.



Innovation

We transform ourselves to offer new business alternatives related to the sector's trends.



Contribution to Regions

We go beyond compliance. We build strong and lasting relationships that foster development.



Renewable Energy

We focus on generating and supplying efficient and sustainable energy, looking after the environment.



Client Experience

We manage the clients' needs and expectations to transform them into memorable products and services.

Materiality Analysis

(102-46, 102-49) In 2018, we carried out a new materiality exercise to update the environmental, social and economic aspects that will be determining factors for the Company in the upcoming years. We went through the following stages:

Celsia 2018 Materiality Analysis Process



1. Research of Topics and Aspects

We started with an analysis of our strategic planning, corporate policies, business risks and topics discussed with the Board of Directors. Additionally, analyzed the electricity and other sectors' trends and benchmark organizations. We also examined criteria from the sustainability indexes, press analysis, current legislation and sectoral publications. With the above, we obtained 170 environmental, social and economic topics.



2. Dialogs and Inquiries with Stakeholders

We held 14 meetings with the stakeholder engagement managers to find out the expectations that arose during 2017 and 2018. We also incorporated the results of the Company's different communications channels.



3. Definition of Material Topics and Prioritization

We qualitatively and quantitatively assessed the 170 topics in order to define the level of priority for the Company as well as for its stakeholders.



4. Validation with Senior Management

In this stage, we confirmed the relevance of the topics identified in the previous phases through an exercise that assessed the scope of each one. The results were consolidated and sent to the Steering Committee and Board of Directors for their approval.



5. Communication and Review

Finally, through this integrated report, we are publishing the results of our materiality exercise, management and results of each one of the prioritized topics, and we will carry our regular reviews to ensure their relevance and alignment with the Company's corporate strategy.

(102-47) Material Topics

1. **Economic Growth**
2. **Business Diversification**
3. **Client Experience**
4. **Development of Human Talent and Occupational Health and Safety**
5. **Energy Resource Management**
6. **Conservation of Ecosystems and Contribution to Society**

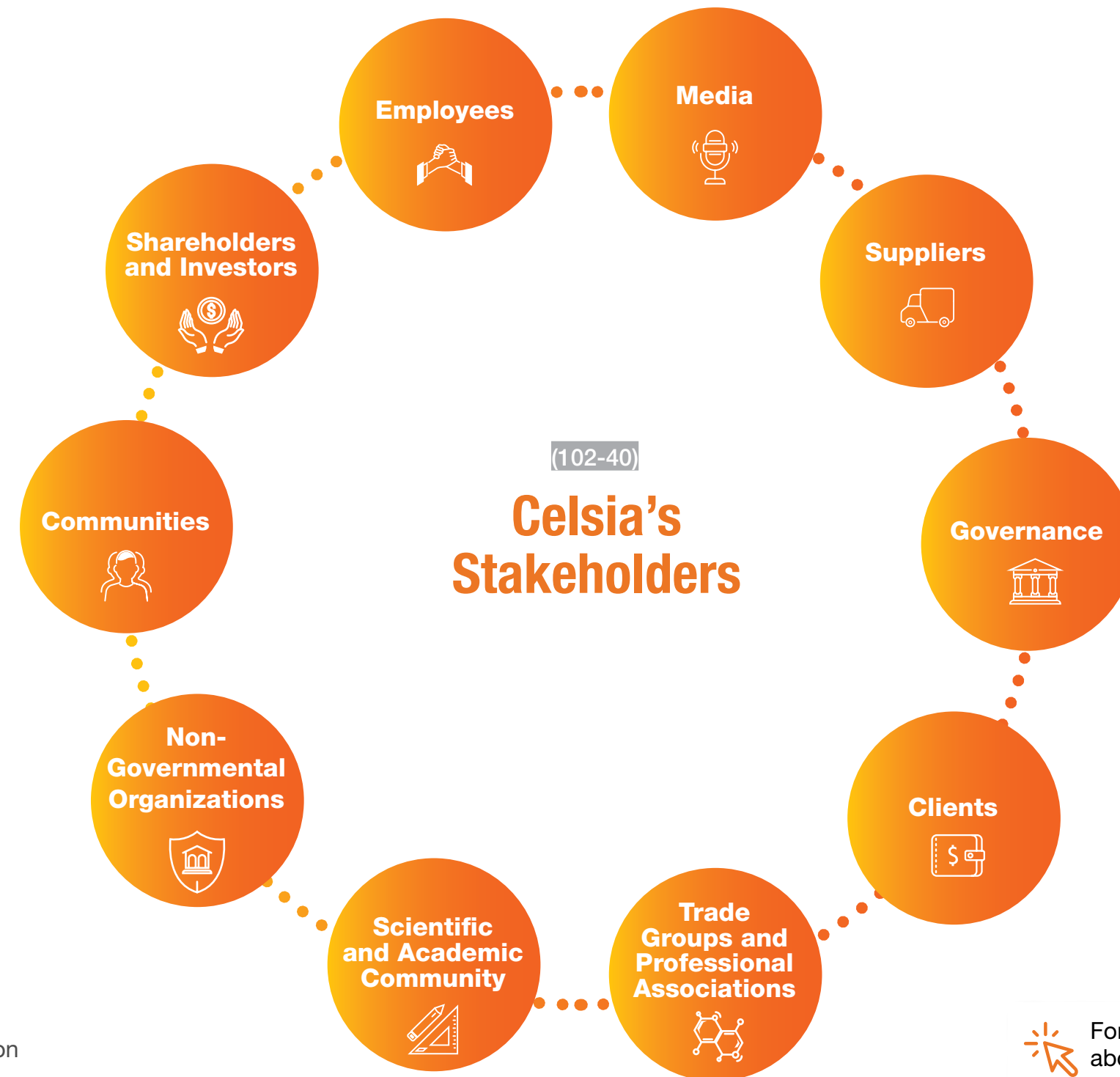
We Improved Stakeholder Engagement Management

(102-41) (102-42) (102-43) (102-44) In 2018, and as a next stage in the evolution of our stakeholder engagement practices, we carried out an exercise to classify, prioritize and standardize our stakeholders throughout the Organization. This aims to focus more precisely and relevantly on their characteristics, the information that we give to them and receive from them, and the media that we have made available to them.

This process included the following activities:

- » Standardization of the corporation and of our operations in Colombia and Central America.
- » Prioritization using the Stakeholder Theory of Ronald K. Mitchell, Bradley R. Agle and Donna J. Wood¹ as a framework, which proposes a holistic view of relations, analyzing the stakeholders according to their power, legitimacy and urgency, as well as their attribute of attention (latent, expectant and definitive).
- » Strengthening of the matrix of stakeholder engagement and the addition of key information for management, taking into account the specific features of each stakeholder and the validation of the results with the stakeholder engagement managers.

1. Mitchell, R., Agle, B. & Wood, D. (1997). Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts. The Academy of Management Review, 22(4):853-886. Accessed at: https://www.jstor.org/stable/259247?seq=30#metadata_info_tab_contents



For more information about our stakeholder engagement, please [click here.](#)




Celsia Solar Bolívar, the first solar power plant in the Colombian Caribbean.

Alignment of the Strategy with the Global Sustainability Agenda

We are committed to the call of the United Nations (UN) to achieve sustainable development by 2030. This consists of a global agenda of 17 goals for protection of the environment, social development and balanced economic growth. In accordance with the above, we have carried out the following analysis:

- » Identification and prioritization of seven Sustainable Development Goals (SDGs).
- » Participation in workshops and forums of reference to understand and internally apply this initiative.
- » Revision of the methods used to report on the progress and contribution to the prioritized SDGs.



 For more information about the SDGs, please [click here](#).

Generation

At Celsia, we manage the generation assets with a comprehensive vision that addresses our culture and achievement of the Organization’s goals. To do this, we carry out different activities that enable us to ensure business continuity through strategic investments and maintenance for the assets with the aim to increase efficiency, uptime, installed capacity and risk management in order to ensure the safety and integrity of our employees and other stakeholders, and to achieve a balance with the environment and with society.

Our Management

Our Company’s electric power generation business currently has a diverse range of renewable and non-renewable energy sources located in three countries of Latin America and with a total installed capacity of 2,397.7 MW, distributed as follows:

Colombia

- » 18 hydroelectric power plants with an installed capacity of 1,109.4 MW
- » 3 thermal power plants with an installed capacity of 777 MW
- » 2 solar farms with an installed capacity of 17.9 MW

- » 27 solar roofs with an installed capacity of 6.34 MW

Central America

- » 3 hydroelectric power plants in Panama with an installed capacity of 118.3 MW
- » 2 thermal power plants in Panama with an installed capacity of 309.2 MW
- » 1 wind power plant in Costa Rica with an installed capacity of 49.5 MW
- » 1 solar farm in Panama with an installed capacity of 9.8 MW
- » 4 solar roofs in Panama and Costa Rica with an installed capacity of 0.32 MW



Guanacaste wind farm, Costa Rica.



(EU1) Installed Capacity

Total Installed Capacity (MW)	Colombia	Central America	Total	Colombia	Central America	Total	Colombia	Central America	Total	Colombia	Central America	Total
	2015			2016			2017			2018		
Total installed capacity	1,853.50	534.8	2,388.30	1,853.47	534.8	2,388.27	1,865.00	534.8	2,399.80	1,910.62	487.12	2,397.74
Hydroelectric (reservoir)	897	0	897	897	0	897	897	0	897	932	0	932
Hydroelectric (run-of-river)	179.5	118.3	297.8	179.47	118.3	297.77	177.42	118.3	295.72	177.42	118.3	295.72
Thermal (simple cycle) – natural gas	167	0	167	167	0	167	167	0	167	167	0	167
Thermal (combined cycle) – natural gas and LNG	610	0	610	610	0	610	610	0	610	610	0	610
Thermal (simple cycle) – diesel	0	160	160	0	160	160	0	160	160	0	102.2	102.2
Thermal (bunker internal combustion engines)	0	87	87	0	87	87	0	87	87	0	87	87
Thermal (coal)	0	120	120	0	120	120	0	120	120	0	120	120
Wind	0	49.5	49.5	0	49.5	49.5	0	49.5	49.5	0	49.5	49.5
Photovoltaic – solar farms	0	0	0	0	0	0	9.8	0	9.8	17.86	9.8	27.66
Photovoltaic – solar roofs	0	0	0	0	0	0	3.781	0	3.781	6.34	0.32	6.66

The installed capacity of the thermal power plants decreased in 2018 because of the removal of the heat recuperators in the gas turbines of the coal-fired thermal power plant in Panama. This decision was made based on an economic analysis of the company.

At Celsia, we keep aligning our efforts to ensure a safe and stable supply of the energy sources, generating the least impact possible on each region where we operate.

Below, we present the main results for each generation technology:

Hydroelectric Power Generation

- » We planned and executed the major maintenance of Unit 2 of the Alto Anchicayá power plant. With this intervention, we achieved a 4% increase in the turbine’s efficiency and recovered its useful life with an investment of USD 1.13 million.
- » We successfully implemented the remote operation of the spillway gates of the Alto Anchicayá power plant. This intervention aimed to improve safety for the maneuvering of this structure through the implementation of a system that is activated remotely from the powerhouse.
- » We implemented a comprehensive sediment management strategy in the reservoir of the Bajo Anchicayá reservoir. This enabled the recovery of 74 MW of installed capacity, which we had lost since 2015. This strategy has had an investment of USD 4.18 million over the last two years.

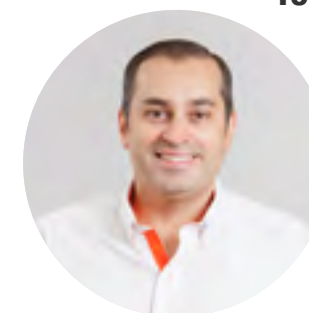
- » We successfully planned and managed the replacement of 5.5 km of power cables in the generators of the Calima power plant, which had completed their useful life. The investment was USD 1.76 million.
- » We changed the intake trash racks of the Prado power plant, and we planned and executed the installation of three pressure regulation valves in each turbine, enabling the continuity of the safe and reliable operation of the power plant. The total investment was USD 2.2 million.
- » We implemented the remote operation of the intakes of the small hydropower plants of Amaime, Alto and Bajo Tuluá, and Hidromontañas, with the aim to optimize operations in terms of costs and risks. The total investment was USD 1.8 million.

Thermoelectric Power Generation

- » We successfully completed the disassembly of the old bunker fuel furnaces of the Bahía Las Minas power plant in Panama, reducing the health, safety and environmental risks.
- » We implemented improvements to the operating and administrative infrastructure of the Bahía Las Minas power plant, which consisted of the repair and maintenance of storage tanks, the replacement of the cone on the coal silos, the replacement of screws on the furnace pipe rack, the repair of the bridge crane of the TV9 pump house and the recovery of the electricity pylons and insulators. The



What challenges do you think the energy system is facing?



“To upgrade the Colombian electric grid by implementing new technology and business systems. Additionally, to gradually diversify the energy matrix, incorporating more renewable energy and efficient and environmentally-friendly thermal power generation. As well as carrying out infrastructure investments that enable us to support expansion and reduce the costs of backup generation or operating restrictions.”

MARCELO ÁLVAREZ R.
Celsia Generation Manager

approximate investment was USD 1.07 million.

- » We completed the maintenance plan for the coal-fired power plant and carried out maintenance of the 48,000 hours of operation of engines 2 and 9 of the Cativá power plant in Panama. The total investment was USD 2.2 million.
- » We managed to increase the efficiency of the steam power plant of Bahía Las Minas through improvements in the units' vacuum. The maximum

load test gave us 120 MW.

- » We replaced the generator of the CT2 combustion turbine and the rotor of the combined-cycle combustion turbine of Zona Franca Celsia in Colombia within the established time and budget.
- » We upgraded the technology of Zona Franca Celsia in Colombia through the migration of combustion turbine 2's control system from Ovation by Emerson to SPPA-T3000 by Siemens, which

gives us greater support, optimization of operation and improvement of operational safety.

- » We achieved an improvement in the energy efficiency of the CT2 combustion turbine of 287 BTU/KWH, which reduces the CO₂ emissions, as well as optimizing the operating costs and achieving a power increase of 10 MW in the combined cycle of Flores IV at Zona Franca Celsia in Colombia.
- » We changed the cooling system of the CT3 combustion turbine, which enables us to forecast a saving of 300,000 KWh, assuming a use factor of 50% of the cooling system.
- » We proposed increasing the reuse percentage of the water we take from the Magdalena River in Barranquilla. In 2017, we achieved the reuse of 15% of the water used for the power plant's processes. In 2018, we proposed increasing this percentage and also optimizing the quality of the water we discharge into the river, achieving an average saving of 15.17%.

Wind Power Generation

- » We coordinated the major maintenance of 26 wind turbines in the Guanacaste wind farm in Costa Rica, which we did by replacing the main components in the following way: 10 stator coils, 12 axle pin sets, 14 rolling bearings of blades and 26 repairs of blades with a new method patented by the manufacturer.



Celsia Solar Divisa. Solar farm in Panama that delivers energy to the country's electrical grid.

Solar Power Generation

- » We started up Celsia Solar Bolívar with 10.2 MWp of power.
- » We acquired the Divisa solar power plant in Panama with 9.9 MWp of power.
- » We started to execute five new solar farm projects in Colombia and Central America with a capacity of 27.5 MWp.
- » We conducted 282 feasibility studies to assess possible self-generation clients, creating a technical report for each case, in which we validated the power in KWp to supply, the voltage level, compliance with the roof structures, secure access to the roofs, and the working at heights system, among other criteria.
- » We implemented the first massive system of solar roofs in Panama with Provivienda, which has a capacity of 1 KWp.

Total Power Generated

- » In 2018, we increased generation by 190 GWh from 2017. This result was achieved because of the assets' uptime. Due to the conditions of the occurrence of the El Niño phenomenon at the end of 2018, an important reduction in the reservoirs' water levels was recorded, which forced us to manage a generation level

that would enable us to meet the commitments, using thermal power generation as well, so we could maintain the reservoirs. This enabled us to respond to the dry season of 2019.

Cogeneration

- » We operated the Nuestro Montería cooling district, which supplied cold water to the shopping mall, enabling the use of a more efficient and environmentally-friendly air conditioning system. This cooling district has the capacity to deliver 1,410 tons of refrigeration.



Calima
hydroelectric
power plant,
Valle del Cauca.

(EU2) Total Power Generated

Total Power Generated (GWh)	2015	2016	2017	2018
Total Power Generated	7,752	7,126	6,317.74	6,516.48
Hydroelectric (reservoir)	2,265	2,370	3,340	3,049
Hydroelectric (run-of-river)	904	1,116	1,420	1,431
Thermal (simple cycle) – natural gas	458	410	4	0.47
Thermal (simple cycle) – diesel	638	9	17.84	0.68
Thermal (combined cycle) – natural gas and LNG	2,918	2,166	942	1,393
Thermal (bunker internal combustion engines)	297	269	275	72
Thermal (coal)	15	588	152	320
Wind	257	198	161.7	227
Photovoltaic – solar farms	0	0	5	17.1
Photovoltaic – solar roofs	0	0	0.2	6.23

Availability

We executed the strategically planned maintenance with the aim to optimize the generation resources in the dry and rainy seasons within the established schedule and implementing

Power Generation Efficiency

Our asset management enabled us to increase the efficiency of our thermal power plants at Zona Franca Celsia and coal-fired power plant in Panama, as shown in the following comparative table for the years 2017 and 2018.

(G4 EU-11) Efficiency Average	Colombia	Central Amer- ica	Colombia	Central Amer- ica
	2017		2018	
Efficiency of simple-cycle, thermal power plants using natural gas (%)	31.98	N/A	27.70	N/A
Efficiency of combined-cycle, thermal power plants using natural gas (%)	41.08	N/A	41.34	N/A
Efficiency of coal-fired, thermal power plants (%)	N/A	26.84	N/A	26.95

The decrease in the efficiency of the simple-cycle, thermal power plants is mainly due to the low dispatches throughout the year.

improvements to the systems, which enable us to increase our assets’ confidence interval.

We have managed to achieve global operation and maintenance (O&M)

standards to the extent that our average availability indicator of the energy generation mix has had a progressive performance over the last four years.



(EU30) Average Power Plant Availability

Average Power Plant Availability (%)	2015	2016	2017	2018	Reason for the Change from the Previous Year
Hydroelectric Power Plants					
Río Piedras	97.54	98.97	86.50	98.51%	Non-destructive testing on turbines in Units 1 and 2
Hidromontañas	95.44	97.29	96.15	96.14%	Non-destructive testing on turbines in Units 1 and 2 Update of speed-regulation software
Alto Anchicayá	92.17	72.02	95.44	86.77%	Overhaul of Unit 2 Annual maintenance of Units 1 and 3
Salvajina	89.16	98.73	82.48	94.80%	Change of insulation of rotor poles in Unit 2
Calima	85.41	92.88	98.13	81.44%	Change of power cables of generation units
Bajo Anchicayá	83.37	99.01	97.93	99.77%	
Prado (Units 1, 2 and 3)	98.72	81.29	98.57	90.11%	Change of intake rash racks Change of PRV of Unit 2
Prado (Unit 4)	97.14	97.34	96.55	89.73%	Change of intake trash racks Annual maintenance of Unit 4
Cucuana	58.18	97.49	98.28	97.70%	Annual maintenance of Units 1 and 2
Amaime	92.97	94.35	93.80	94.51%	Inspection of turbine in Unit 1 and improvement of supporting services
Río Cali	90.63	88.26	92.04	96.26%	Automation of speed-regulation system in Unit 2 of Río Cali I
Nima	80.95	97.12	56.90	93.18%	Non-destructive testing on turbines of Units 1 and 2
Alto Tuluá	79.60	49.66	89.16	97.01%	Turbine inspection in Unit 1 and recovering of the turbine in Unit 2
Bajo Tuluá	91.46	95.48	99.43	98.06%	Inspection and recovering of turbines in Units 1 and 2
Rumor	90.24	98.96	94.98	93.42%	Major repair of turbine in Unit 1



Average Power Plant Availability (%)	2015	2016	2017	2018	Reason for the Change from the Previous Year
Río Frío 1	88.29	85.67	96.89	82.23%	Major repair of turbine in Unit 1
Río Frío 2	99.99	86.81	98.49	86.11%	Major repair of turbine in Unit 2
Prudencia	97.00	97.52	93.05	95.05%	Annual maintenance of Units 1 and 2. The formula was altered in 2018 to calculate the uptime according to the weighted average of the power plants' installed capacity. In previous years, it was calculated with the average uptime.
Gualaca	97.00	97.23	94.58	96.69%	Annual maintenance of Units 1 and 2. The formula was altered in 2018 to calculate the uptime according to the weighted average of the power plants' installed capacity. In previous years, it was calculated with the average uptime.
Lorena	94.00	94.09	97.58	97.13%	Annual maintenance of Units 1 and 2. The formula was altered in 2018 to calculate the uptime according to the weighted average of the power plants' installed capacity. In previous years, it was calculated with the average uptime.
Thermal Power Plants					
Flores I	94.92	89.47	86.32	99.35%	
Flores IV	84.95	87.87	99.93	88.23%	In April and May, we conducted major maintenance on Flores I.
Merilétrica	99.86	98.62	99.88	98.76%	
Carbonera	82.00	78.11	47.90	90.62%	
Combined cycle in Panama	64.00	77.96	79.00	96.60%	
Cativá (internal combustion engines)	84.00	80.97	84.80	91.90%	
Wind Power Plant					
Guanacaste wind farm	98.00	96.51	92.48	95.01%	In May, we carried out non-routine maintenance based on the replacement of the main components, which was extended for four months, intervening in 29 turbines in 2017 and 26 turbines in 2018, which directly affected uptime. Additionally, in the same years, there were frequent failures of stator coils, which also had repercussions on the power plant's uptime.

Energy Generation Mix

At Celsia, we have a sustainable strategy focused on renewable energy according to which, during 2018, we developed different initiatives, which enabled us to increase the installed capacity in solar power plants in both Colombia and Panama.

- » In Colombia, we built the Celsia Solar Bolívar power plant of 8.06 MW in Santa Rosa de Lima, in the department of Bolívar, consolidating a portfolio of solar farms in the country of 17.9 MW, together with Celsia Solar Yumbo.
- » Also in Colombia, we acquired control of Begonia Power S.A.S. E.S.P. with power plants under construction in La Guajira, which have an environmental license and connection approved by the UPME, and are at different stages of maturity regarding connection. In total, they provide 330 MW in four wind power plants.
- » In Panama, we acquired Divisa, a 8.2 MW solar farm located in Llano Sánchez, in Coclé Province, and which has been in operation since August 2015.
- » In 2018, we made important progress in the projects we have under development and we hope to start construction soon of our solar power plants in the departments of Tolima, Cesar and Santander in Colombia, as well as in Panama and Honduras.
- » We made 30% progress in the construction of the small hydroelectric power plant in San Andrés de Cuerquia, of 19.9 MW, located in Antioquia, Colombia.

Source of Generation	Generation 2018 (% of total TWh sold)	Installed Capacity 2018 (% of total MW)
Total	6.52 MW	2,397.74 MW
Coal	4.92%	5.08%
Nuclear	0	0
Natural gas	21.42%	32.89%
Liquid fuel	1.11%	8.01%
Hydroelectric (more than 10 MW)	66.32%	49.32%
Wind	3.42%	2.1%
Other renewable energy (solar, hydroelectric less than 10 MW, geothermal, biomass, etc.)	2.81%	2.60%

2018 Milestones

- » In 2018, we achieved a 4% increase in the efficiency of the turbine of Unit 2 of Alto Anchicayá.
- » We recovered the installed capacity of 74 MW at Bajo Anchicayá, which we had lost since 2015.
- » In the thermal power plants in Panama, we achieved the highest uptime on record for Celsia: 93.04%.
- » We managed to increase the efficiency of the steam power plant of Bahía Las Minas by 0.11%.
- » We achieved the recovery of 8.5 MW in the CT2 combustion turbine of Zona Franca Celsia.
- » We achieved an improvement in the energy efficiency of the CT2 combustion turbine of 87 BTU/KWH at Zona Franca Celsia.

The total generation in 2018 was 6,516 GW and the installed capacity was 2,362.2 MW.



We advanced in the construction works of the small hydroelectric power plant of San Andrés de Cuerquia.

Where Are We Heading?

Short Term (0 to 2 years)

- » Start-up the San Andrés small hydroelectric power plant.
- » Continue the consolidation of our supply of solar power generation in Colombia and Central America.
- » Enhance the portfolio of wind power generation in the phases of development of the projects currently planned for the medium term with the construction of Celsia's first wind power plant in Colombia.
- » Implement remote operation from NOVA of four small hydroelectric power plants.
- » Improve the operational security and safety of the processes according to the philosophy of asset management in the power plants.
- » Develop all the elements required for the implementation of in-house detailed engineering for solar floor and solar roof projects.

- » Incorporate distributed generation into the generation matrix with cooling districts and cogeneration plants.

Medium Term (3 to 5 years)

- » Consolidate the wind power supply through the start-up of projects in north Colombia.
- » Develop a wind power plant in Costa Rica to take advantage of the possible granting of a project by the Costa Rican Electricity Institute.
- » Continue to identify and develop initiatives that enable the increase in installed capacity of the solar and wind power plants in both Colombia and Central America.
- » Update the components of combustion turbine 3 of Zona Franca Celsia to increase its power, its maintenance cycles and its reliability.

- » Carry out maintenance on the assets with own resources to maintain the highest uptime and reliability rates without the support of the manufacturer in the Guanacaste wind farm.

Long Term (6 or more years)

- » Keep identifying new business models or new markets that enable the development of initiatives aligned with the Company's sustainable renewable strategy.
- » Implement the technology upgrade of power transformers in the units at Bajo Anchicayá.
- » Increase the efficiency of the Francis turbine in the Salvajina power plant.
- » Enter new markets in the Caribbean and Central American region.


Transmission and Distribution




Electric distribution system in Valle del Cauca.

We give our best to achieve operational excel- lency, contributing to the sustainability and profitability of the Company, and to the growth of our stakeholders in the areas of influence of the Transmission and Distribution business, and implementing best practices in the sector. We also manage the business risks and analyze the diversions that could affect the strategic and cor- porate objectives.

We are committed to the continuous improve- ment of our service quality indicators to satisfy the needs of our stakeholders, to carry out timely and efficient management of assets and to con- tribute to the achievement of our BHAG. Simi- larly, the Transmission and Distribution business is consolidated as one of the central lines of the Company and contributes to the growth and sus- tainability of the business.





Which technology upgrade projects do you think positions Celsia at the same standard of the best companies in the world?

Entry into the business of non-conven- tional sources of energy and the plans to make electric transit accessible.

How does Celsia contribute to the devel- opment of new horizons in the energy industry?

With innovative business lines that are leveraged in an ecosystem of suppliers based on the economy of knowledge.

What makes Celsia a different Company in the sector?

Its approach as an energy service com- pany with a high component of innovation and development of own solutions.

ALEXANDER VALENCIA RENDÓN,
Gaia Manager, Technology and Innovation



Our Management

We have the best team of employees, which is the essential force to achieve the targets set. The activities of our business focus on reducing losses, promoting our clients’ efficient energy consumption and optimizing the use of our networks, maximizing reliability, seeking the best performance of our assets, strengthening and making the network flexible, providing our clients with quality and service continuity, and developing strategic projects, which enable us to increase with profitability.

Our Infrastructure

Our expansion is based in north Colombia with Plan-5Caribe and with Celsia Solar Bolívar. With the former, we executed projects called Montería, Caracolí and Manzanillo, which enabled us to strengthen our presence and contribute to the improvement of the electric grid's reliability in the region. Additionally, with the solar farm, we started to supply electricity to around 7,400 Colombian families.

The transmission and distribution infrastructure in Valle del Cauca had constant growth. The technical and operating team designed, executed, operated and maintained each new and existing network section with the aim to improve our service quality indicators, respond to the demand and satisfy the needs of our clients.

(EU 4) Transmission and Distribution Infrastructure	2015	2016	2017	2018
Number of transmission substations	12	12	16	17
Total length of the transmission network (≥220 kV) in km	274	274	291	291
Number of distribution substations	72	74	84	92
115 kV substations	22	24	32	38
34.5/13.2 kV substations	50	50	52	54
Total length of the transmission network in km	20,069	20,246	20,473	20,781
Overhead (<220 kV)	19,997	20,152	20,359	20,633
Underground (<220 kV)	72	94	114	148
Total number of distribution transformers installed in the network	28,571	29,004	29,343	29,650
Company transformers	17,612	17,978	18,338	18,663
Third party transformers	10,959	11,026	11,005	10,987

Our Management

Loss Management

We strive to maintain the loss indicator in line with the growth of our assets, supporting ourselves with technology that efficiently manages the consumption of our clients and, in turn, optimizes the use of our networks. Additionally, we develop capacity and analyze the existing information to propose strategies that enable us to continue on the path to improvement, becoming one of the national benchmark companies in terms of loss management.



Operators working on the maintenance of electricity networks and pylons.

(EU 12) Losses in the Transmission and Distribution Systems

Technical Losses (%)	2015	2016	2017	2018	2018 Target
Technical losses in the distribution network	4.94	4.94	4.94	4.94	4.94
Technical losses in the transmission network	1.4	1.4	1.48	1.48	1.48
Network Losses (%)	2015	2016	2017	2018	2018 Target
Losses in the distribution network (34.5/13.2 kV)	8.72	8.3	8.39	8.3	8.31
Technical losses in the transmission network (115 kV)	0.86	0.75	0.79	0.8	0.91

Network losses are calculated for voltage levels III, II and I, and they are the result of the sum of the losses recorded in the sales frontiers, including all clients.

Technical losses are the result of the calculation of the difference between the energy entering our system and the energy delivered by it, taking into account the parameters and characteristics of the equipment connected to the network.

The transmission and distribution investment plans included an energy loss plan that covered metering reliability, operating plans in the field and data analytics of the results of this metering.



Reliability

We focused our efforts on the improvement and performance of our assets with the aim to strengthen the network and make it flexible so that clients can have a continuous and reliable energy service. That is how we created initiatives that were prioritized based on the quality of service and the needs of the system in terms of versatility and flexibility.

The projects and activities implemented in 2018 enabled us to achieve the proposed target of 99.83% in distribution and 99.70% in transmission. The figures reflect the commitment to continuous improvement.



Caracolí substation, Barranquilla, works that are part of Plan5Caribe.

Average Reliability (%)

	2015	2016	2017	2018
National Transmission System	99.93	99.95	99.66	99.70
Regional Transmission System	99.92	99.95	99.83	99.83

The above is reflected in the quality of service. These indicators measure the duration (SAIDI) of the interruptions and their frequency (SAIFI) received by our clients. They are closely related, because the performance of our assets continuously improves in the environment in which they are

located and thanks to the collaboration of our partners, with which we have complete logistics to carry out the required maintenance and to be able to respond to the incidents that occur in the network as quickly as possible.

(EU 28) (EU 29) Service Quality Indicators

	2015	2016	2017	2018	2018 Target
SAIFI (amount)	15.69	16.16	19.33	15.1*	17
SAIDI (hours)	12.21	13.17	16.19	11.7	14.3

* This figure does not include the attempts of tests on the circuits during restoration of the service.

Projects

Plan5Caribe

We successfully progressed with the projects established for 2018 and we marked a milestone in fulfillment of deliveries and in the scope of each substation. Now, we are operating from our control center in Yumbo and we are executing the local maintenance plans.

Another piece of good news is that we were awarded another project for the Caribbean Coast, which is for the construction of 160 km of network at 220,000 volts and a new substation.

Distributed Generation – Photovoltaic Systems

We started up our third solar power plant, Celsia Solar Bolívar, which is located in the municipality of Santa Rosa Lima, Bolívar, and has a generation capacity of 8.06 MW. This solar farm adds to the one in Yumbo and the one of Centro Internacional de Agricultura Tropical (CIAT) in Palmira, with which we are a benchmark in Colombia in terms of clean electric power generation.

Smart Demand Management

We evolved toward the implementation of technology capacity to benefit our end clients. We designed products such as Remunerated Disconnection and Efficient Consumption and we implemented four prototypes with which we conducted control tests and tests of the business model, through the tool that will enable us to manage the demand. Additionally, we developed an application so that telemetered clients can monitor the behavior of their demand curve.

AMI (Smart Metering)

We installed another 20,500 smart meters and we integrated them into our IT systems. Now, the reading, disconnection and reconnection functions are enabled.

Advanced Vision Operating Center (Nova, in Spanish)

We conducted additional tests in manufacturing for the quality of the solution,

which required that we postpone the date of implementation of Phase 1 to the fourth quarter of 2019. In parallel to this, we progressed in the planning of training for the users of the tool and we complemented the transmission network model through the distribution network, consisting of almost 300 circuits that will be revised, tested and adjusted in the implementation of the project’s next phase.

+Designs

New Substations

- » El Carmelo, Guabinas and La Cumbre

Extension of Substations

- » El Cerrito, Termoyumbo, Calima and Alférez

Solar Power Connections

- » Bolívar and Valledupar in Colombia, and Honduras

We Started Connection Design

- » Wind power plants: Begonia and El Carreto
- » Chicamocha solar park
- » New substations: Vijes (115 kV) and Río Jamundí (34.5 kV)



Palmaseca substation, Valle del Cauca.

2018 Milestones

- » Income of COP 475,836 million, a 4.7% increase from the previous year.
- » Five solar farms implemented for a total of 27,500 kWp of installed capacity.
- » Integration of operating assets: Plan5Caribe, Central American power plants and the Yumbo and Bolívar solar farms.



Where Are We Heading?

Short Term (0 to 2 years)

- » Prepare the report on assets (CREG and Superintendence of Residential Public Utilities) and survey of Level I assets to comply with the new distribution resolution.
- » Implement good practices for operating safety, ensuring reliability of operations.
- » Bring out the GIS Network – NOVA module.
- » Design and manage the Tolú Viejo (230 kV) project in terms of socio-environmental and property factors.
- » Consolidate the presentation for the Plan6Caribe call for tenders of the Mining and Energy Planning Unit (UPME, in Spanish).
- » Continue with the design and engineering of specific

networks (Barú, Amarilo and Cartagena Airport).

- » Integrate and operate the new assets of non-conventional sources and Plan6Caribe.
- » Reduce the damage response time with automatic routing of WFM alerts.
- » Comply with the second five-year review of CREG Resolution 038/2014.
- » Integrate client information with AMI technology to improve service indicators.
- » Carry out training modules for operation in real time.
- » Start Phase I of Nova (ADMS).
- » Continue to automate the reconfiguration of circuits.
- » Fulfill the investment plan, which includes the loss, quality and expansion plans.
- » Start the Plan5Caribe projects:

Nueva Barranquilla (Norte substation), Caracolí and Valledupar.

- » Start up projects in Valle del Cauca, such as El Carmelo substation and Guabinas substation.
- » Complete the civil works, supplies and electromechanical assembly of the San Andrés line (110 kV).
- » Implement the Strategic Asset Management Plan.
- » Install 14,819 upgraded smart meters and 5,000 regular meters.
- » Launch the Decentralized Energy Management System (DEMS) platform for demand management and new business models.

Medium Term (3 to 5 years)

- » Assess new business models of remote control and demand management that allow us to increase revenue.
- » Equip the asset management business with new technological capacity by starting the NOVA upgrade, smart metering and asset management implementation projects.

Long Term (6 or more years)

- » Increase our revenue through the growth of the asset management business or acquisition of transmission and distribution assets with a more active role in the demand and improvement of the reliability and quality indicators.

Sales

At Celsia, we know that energy sales have transcended the traditional concept of purchase and sale of the utility and we have decided to become partners in our clients' energy efficiency. Therefore, we dare to incorporate bespoke products and services for the needs of the

clients and of the market, contributing to the achievement of the BHAG, with policies and goals for enterprise management of sales risk, from negotiation to the delivery of products and services to clients of both the wholesale market and retail market.



Tuluá, one of the 39 municipalities we serve in Valle del Cauca.

Our Management

Wholesale Segment

Through sales on the wholesale market, we ensure value generation for the Company and its stakeholders and we manage sales transactions of electricity in large batches between generators and resellers. In the long term, we do this through power purchase agreements and in the short term, through the spot market, subject to the Operations Regulation and other regulations of the activity. Additionally, in this market, we manage the reliability charge and its corresponding secondary market and the fuel supply. We also participate in the energy derivatives market in the short, medium and long term.

In Central America, wholesale enables the sale of generated electricity and firm power available, i.e. energy that can deliver one generation unit with a high level of reliability in the short, medium and long term in order to ensure revenue that makes maintaining existing assets and developing new projects feasible.

Retail Segment

Through retail sales, we supply regulated energy in more than 39 municipalities in west Colombia and we deliver products and services to our non-regulated energy clients in Colombia and Panama. Non-regulated clients are those with a maximum demand that exceeds 100 kW and that have contracted the electricity supply as a large client, while regulated clients adhere to the contract of uniform conditions of the selected reseller.

Our aim is to serve all our clients (regulated and non-regulated), leveraging ourselves on the development of new products and services that enable us to satisfy their needs and expectations.

We serve our clients in three strategic business units:

- » **Home:** Residential clients who manage their energy consumption through environmentally-friendly options.
- » **Business:** Clients focused on optimizing their energy consumption and ensuring back-up of the service.
- » **City:** Projects to develop cities and centers with energy solutions that benefit the community sustainably.

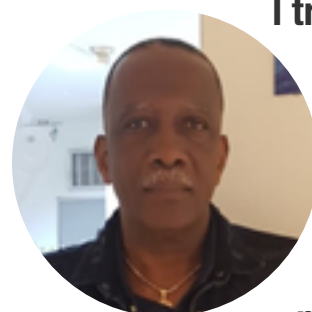
Our portfolio of services includes:

- » Conventional energy, self-generation, backup energy, efficient lighting and solar energy
- » Cooling districts and cogeneration
- » The Home line with electric vehicles (bicycles and mopeds), efficient lighting (light bulbs) and efficient household appliances (refrigerators, washing machines, televisions, etc.) and with direct financing through the electricity bill

Additionally, our billing and collection processes enable us to use the electricity bill to incorporate the services provided by third parties, such as waste disposal, public lighting and the security and citizen coexistence fee, as well as mass products of loans and insurance. We are preparing ourselves to incorporate the invoicing of new waterline, sewage, gas and telecommunications services at Serena del Mar (Cartagena).



What do you like about Celsia's human factor?



I trust them completely. There is always a good service and willingness to resolve requests. I can contact different people, who I can call at any time, without any problem.”

LEONCIO GARCÉS VALENCIA

Project Engineer

Sociedad Portuaria de Buenaventura

2018 Milestones

- » On the wholesale market in Colombia, we achieved 103% execution of the budgeted sales margin.
- » On the wholesale market, we carried out the Celsia-Cogenerators day, where we strengthened commercial relations and shared experiences with our suppliers of surplus energy about their cogeneration processes.
- » For the wholesale market, in sales to third parties for the reliability charge, we achieved sales of COP 15,677 million; the highest value since the establishment of the secondary market.
- » On the Colombian retail market, we managed to increase our conventional energy sales by 6.9% from 2017.
- » On the retail market in Central America, we supplied 150 GWh to 16 large clients, meeting the budget 7.5 times over.
- » We sold and installed 17 charging stations for electric vehicles

Retail Segment

By the end of 2018, in Colombia, we served 623,206 regulated clients in Valle del Cauca and San José del Palmar (Chocó). This represents an increase of 20,287 clients from 2017 and 3.4% growth; the largest increase in clients in the last five years. Out of these new clients, 19,921 are residential clients as a result of urban projects in Jamundí, Palmira and Candelaria.

In the non-regulated market, we served 645 clients in Colombia and we established contracts with the first 16 clients in Panama. In Colombia, out of the 645 clients, 16 are for public lighting in Valle del Cauca and 629 are business clients. The latter are distributed as follows: 420 are in Valle del Cauca, 125 are in Bogotá and its surroundings, 28 are on the Caribbean Coast, 21 are in Cauca and 35 are in other cities.

Additionally, among the non-regulated clients of Panama, the following clients stand out: Cementos Argos, The Ocean Club and Alta Plaza Mall, which together consume more than 7 GWh, and in 2018, consumed 150 GWh.

	Colombia				Central America		Celsia Total	
(102-6 /EU3) Number of Clients by Type	2015	2016	2017	2018	2017	2018	2017	2018
Residential clients	536,749	552,764	568,884	588,805	0	0	568,884	588,805
Industrial clients (in regulated category)	3,154	3,289	3,391	3,496	0	0	3,391	3,496
Commercial clients (in regulated category)	26,307	27,291	28,262	28,595	0	0	28,262	28,595
Government clients	2,256	2,341	2,382	2,310	0	0	2,382	2,310
Non-regulated clients	604	585	592	645	0	16	592	661
Subtotal of regulated and non-regulated clients (A)	569,070	586,270	603,511	623,851	0	16	603,511	623,867
Subtotal of clients of new products (B)	0	0	292	1,068	2	5	294	1,073
Wholesale market clients	24	22	42	45	3	8	45	53
Natural gas clients (supply and/or transportation)	9	9	7	9	0	0	7	9
Subtotal of wholesale clients (C)	33	31	49	54	3	8	52	62
Total clients (A+B+C)	569,103	586,301	603,852	624,973	5	29	603,857	625,002



(C-CO1) Electricity Sales to Retail Clients

	Colombia					Central America	
Electricity Sales	2014	2015	2016	2017	2018	2017	2018
Electricity sales (GWh)	1,930	2,095	2,101	2,137	2,275	2,067	150
Regulated market sales (GWh)	1,095	1,181	1,206	1,188	1,213	1,058	1600
Non-regulated market sales (GWh)	835	914	895	949	1,062	1,009	150

The collection index is the ratio between the income obtained from the electricity supply compared to the values charged to clients for this same item during the year. It demonstrates the efficiency of the collection management, which ensures the Organization's financial sustainability. Celsia's retail sales collection index is 98.8%, COP 10,537 are still pending to be collected in Colombia. Out of this figure, COP 5,900 million correspond to the current debt portfolio, due to the transfer of the portfolio to the following year because of the expiry of the bills of some non-regulated clients and debts of state entities, especially in the education and health sectors.

(C-CO2) Collection Index for Retail Clients

	Colombia				Colombia	Central America	Celsia Total
Collection Index (%)	2014	2015	2016	2017	2018		
Electricity collection index	99.60	99.30	99.60	98.1	98.9	46.4	98.8
Regulated market index	99.10	99.40	99.50	98	98.7	0	98.7
Non-regulated market index	100.30	99.00	99.70	98.2	99.1	46.4	98.9



Finally, we obtained income from services related to the electricity supply:

- » Commission for the billing and collection of the waste disposal service amounts to COP 8,587 million, when including new clients in existing contracts and contracting of the service in the municipalities of Alcalá and Calima El Darién.
- » Commission for the billing and collection of the special security and citizen coexistence fee in Valle del Cauca amounted to COP 96 million.
- » In the City segment, we obtained income of COP 46 million for the provision of the public lighting management, operation and maintenance services.
- » The mass services of the Home segment obtained income of COP 1,658 million for the invoicing of loans and insurance.
- » We invoiced COP 9,409 million for the portfolio of energy solution products, which includes electricity projects, sale and installation of equipment, testing and analysis, and emergency response.

Other Income Related to the Electricity Supply – Colombia (Millions of COP)	2017	2018
Waste disposal service	7,529	8,587
Security and coexistence fee	69	96
Loans and insurance	1,707	1,658
Public lighting management, operation and maintenance	219	46
Energy solutions	6,344	9,409
Total	15,868	19,795



The Postobón factory receives clean energy from our Celsia Solar Yumbo solar farm.



Celsia
Solar
Bolívar.

Wholesale Segment

In 2018, we served 54 clients in Colombia. It is important to note that the number of long-term electricity supply contracts decreased (maintaining an adequate level of contracts in terms of electricity). This situation was offset with the increase in clients of the reliability charge in the secondary market, which kept gaining force due to the conditions of the energy market. In turn, in Central America, we served eight clients, a figure 167% higher than in 2017, due to the incorporation of large clients into the wholesale market portfolio in this region.

In Colombia, electricity sales in long-term contracts during 2018 amounted

to 3,279 GWh, compared to the budget of 3,392 GWh, while spot market sales were 3,086 GWh, compared to a budget of 2,087 GWh. These results are supported by optimal management in the dispatch of hydroelectric power generation and by adequate fuel management, which enabled us to carry out the necessary thermal power generation, fulfilling the expectations initially proposed in the budget.

In Central America, contract sales amounted to 1,600 GWh out of the budgeted 1,742 GWh, equivalent to 92% executed. Spot market sales amounted to 165 GWh, representing 103% of the 161 GWh budget.

We continued to actively participate in the calls for tenders for the electricity supply. In Colombia, we participated in 40 processes. Said participation is subject to the energy availability for the years required in each call for tenders, respecting our Risk Management Policy.

In November 2018, the incorporation of the Celsia Solar Bolívar solar farm into the Organization's portfolio of generation resources stands out. This power plant has an installed capacity of 8.06 MW, with which we keep promoting renewable energy in Colombia and a low-emissions energy development model.

In terms of the representation of third party assets in the wholesale energy market, we continued with the cogenerators of Ingenios Mayagüez, Manuelita and Carmelita, the self-generators of the power plants of Cementos Argos (Cartagena, Yumbo and Tolú Viejo), as well as other generation assets (Cucuyo small power plant, Tequendama biogas power plant and the Agua-fresca small power plant).

2018 Milestones

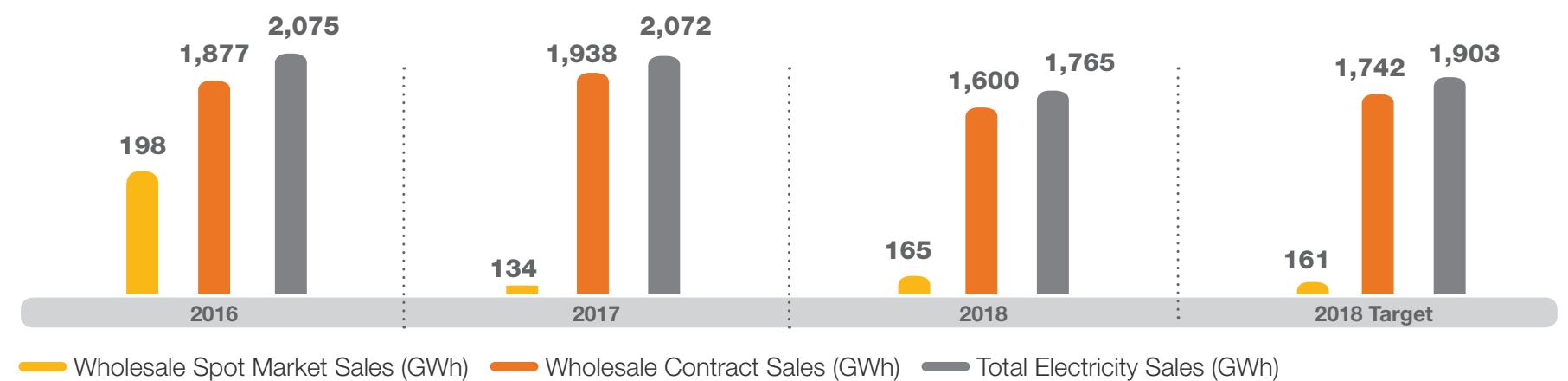
- » Ninety-six clients who were served by another reseller in Jamundí chose Epsa as their new energy reseller. We conducted the technical telemetering tests to establish their contracts.
- » From our Termoyumbo substation, we connected the Postobón and Ciudad Guabinas clients. The latter is a project that will consist of 12,000 housing units in eight years.
- » We provided electricity to the first 38 residential clients and one commercial client of the Serena del Mar project in Cartagena, a project that upon completion will have 22,000 clients.
- » We sent digital bills to around 4,000 regulated clients and 32 non-regulated clients, who received a hard copy as well as an electronic copy via email.



Business Model • The BHAG • Celsia PermaneC • Generation • Transmission and Distribution • Sales

(C-CO1) Electricity, Gas and Fuel Sales	Colombia				
	2015	2016	2017	2018	2018 Target
Wholesale contract sales (GWh)	5,007	4,146	2,920	3,279	3,392
Wholesale spot market sales (GWh)	3,708	3,284	3,232	3,086	2,087
Sales of liquid fuel (GBTU/year)	0	0	0	0	0
Natural gas sales (GBTU per year)	10,693	11,392	1,362	5,178	5,546

Electricity Sales in Central America



Fuel Management

The acquisition of fuel for the operation of the thermal power plants is a critical process for the Organization, especially in the dry season. In Colombia, we were able to obtain 100% of the required fuel with purchases from different suppliers, which amounted to COP 93,328 million. With the regasification plant in Cartagena, we made seven purchases of liquefied natural gas (LNG) of 248,484 m³, with a total cost of USD 56 million.

With respect to supply management in Central America, we highlight the purchase of the required fuels (coal, bunker and diesel) with a total cost of USD 30.9 million.

In turn, with the complexity of the conditions of the wholesale natural gas market, added to the high fuel requirements for the electric power generation of our thermal power plants –which exceeded the demand projections–, we managed to cover 93% of the budget for the sale of natural gas to our clients under the “Annual Firm Energy” and “With Interruptions” categories, amounting to a figure of 5,178 GBTU/year.



Where Are We Heading?

Retail Segment

Short Term (0 to 2 years)

- » Implement the management of non-regulated and new businesses clients with the new sales system, covering relations and operating activities of the sales category, ensuring the different products and services available to them.
- » Incorporate the management of regulated clients into a second phase of the new sales system, which facilitates customer service in a single contact.
- » Serve new clients with solar energy through businesses in Panama and Honduras.
- » Serve a total of 20 large clients in Panama by the end of 2019.

Medium Term (3 to 5 years)

- » Consolidate 2,000 regulated end clients in new markets with

- conventional energy and products of the new businesses that ensure their retention to achieve the BHAG.
- » Assess participation in distribution companies, which facilitate the service for regulated clients on markets in which Celsia operates.
- » In Central America, increase our participation in the non-regulated market with energy generated by our own power plants and with distributed generation through solar panels.

Long Term (6 or more years)

- » Serve one million clients by 2025 by maintaining the existing clients, regaining those in the area of influence and attracting new clients in Colombia.
- » Assess the Organization’s portfolio of products and services to bring businesses to the cutting-edge of regulations and technological progress.

Wholesale Segment

Short Term (0 to 2 years)

- » Maintain the normal levels of participation in the calls for tenders for the electricity supply of the sector's different companies.
- » Obtain contracts for longer terms.

Medium Term (3 to 5 years)

- » Explore new management tools, incorporating those that can provide better results in the prediction and forecast of the market variables.

Long Term (6 or more years)

- » Incorporate the new power generation projects that the Organization develops, such as the solar and hydroelectric power plants, into sales management.

Advanced Vision Operating Center
(Nova, in Spanish)
in Yumbo, Valle del Cauca.

06

Material Topics



Our stakeholders benefitted:

Shareholders and Investors | Employees | Communities | Suppliers | Clients | Government



Economic Growth

Key Indicators

Net earnings:
COP 350,699 million
(+40% vs. 2017)

EBITDA:
COP 1.13 trillion (vs.
COP 1.12 trillion in 2017)

Net debt / EBITDA:
2.7 times (vs.
3.20 times in 2017)

Why is it important?

(103-1) We must maintain a long-term outlook and continue to generate value for our stakeholders so that the financial results are healthy and in harmony with the dynamics of relations with our social and environmental surroundings.

Our Management

(103-2) At Celsia, we are close to achieving that Colombians receive more renewable energy generated from wind and solar power in their homes. This achievement is related to our strategy to increase operation focused on renewable energy. We constantly transform ourselves to achieve the goal of becoming important players in the energy sector.



Solar roof, Convention Center, Cartagena, Colombia.



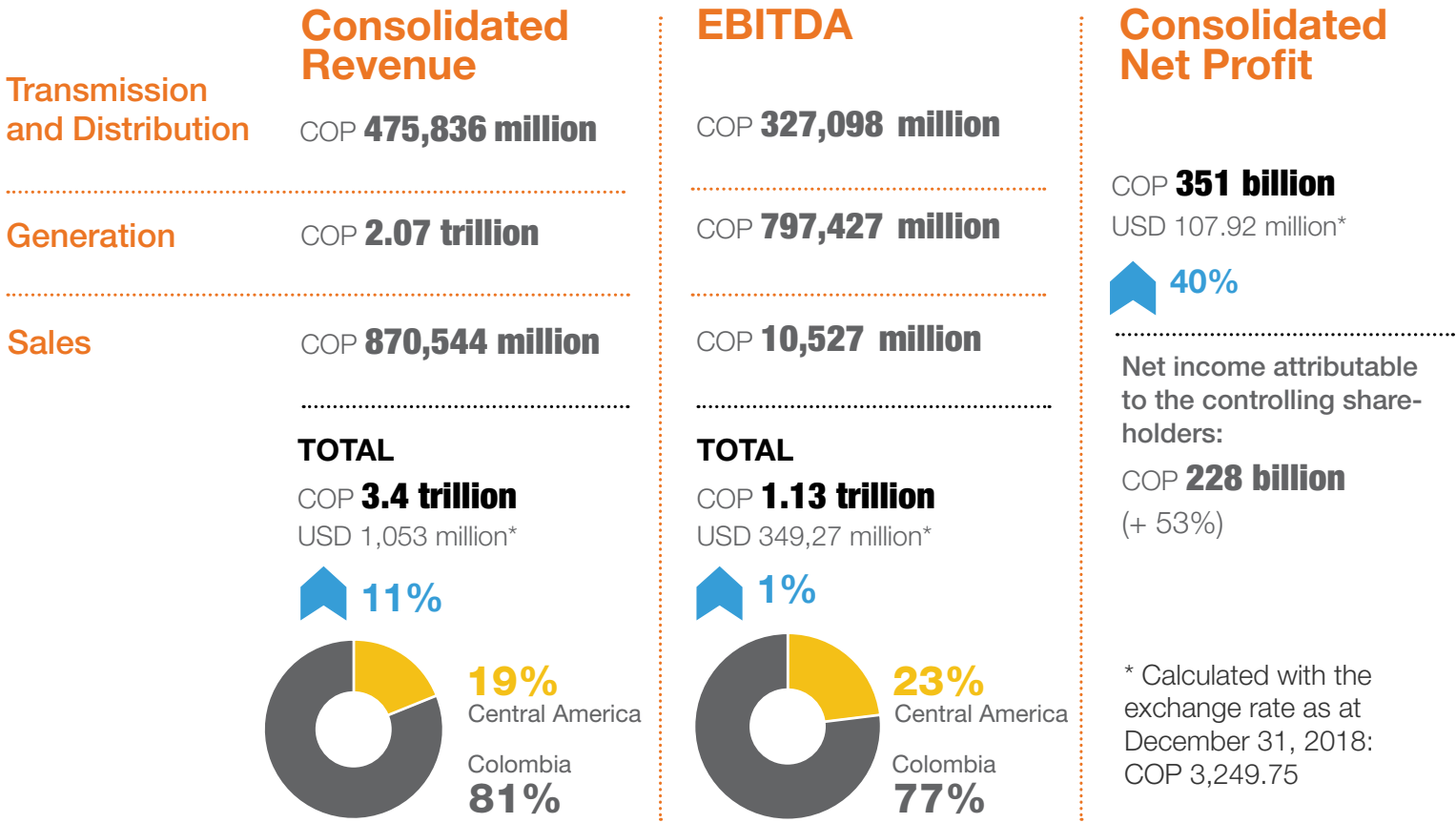
Gualaca hydroelectric power plant.
Dos Mares hydroelectric complex, Panama.

2018 Milestones

- » Share issuance amounting to COP 1.47 trillion.
- » Green bond issuance program amounting to COP 420,000 million. Amount issued in 2018 of COP 140,000 million. First company of the real sector in Colombia to use this kind of financing.

Our Results

(103-2) The results of our businesses were positive, both in operations and finances. Consolidated revenue amounted to COP 3.42 trillion (+10.7% Y/Y). Revenue in Colombia comprised 81% of the total consolidated revenue while the revenue of Central America comprised 19%.



- » (102-10) Consolidation of operations in Colombia through Epsa, with the purchase and sale of generation assets and the commercial representation of Meril  ctrica (16 MW).
- » Decrease in the net debt / EBITDA ratio to 2.7 times, lower than the 3.2 times of 2017.
- » The credit risk ratings of Celsia and Epsa were maintained at AA+ and AAA, respectively.



(201-1) Direct Economic Value	Millions of COP
Economic value generated	3,424,430
Revenue	3,424,430
Economic value distributed	4,045,130
Payments made to suppliers of goods, services and materials	1,913,542
Salaries and mandatory and voluntary benefit payments for employees	233,155
Payment to suppliers of capital (Corresponds to short and long-term borrowings and debt. Does not include accounts payable.)	1,596,398
Tax payments to governments	277,075
Investments in the community	24,960
Economic value retained	-620,700
EBITDA	1,135,052
Net profit	350,699
Net profit / EBITDA	0.31
Net debt	3,625,804
Net debt / EBITDA	3.2

Note: The calculation of economic value retained (EVR) includes amortization of debt capital carried out in the year of COP 1,138,497 million as part of the payment to capital suppliers (economic value distributed –EVD– line) These resources were funded with the share issuance in February 2018 and they generated COP 1,478,400 million, which is not taken into account in the calculation method of the economic value generated (EVG).

Millions of COP	National Taxes			Regional Taxes	Other Taxes*	Total
	Income and Irregular Income Tax	Wealth Tax	Industry and Commerce Tax	Property Tax		
Colombia	183,123	0	12,538	2,223	72,620	270,504
Panama	244	0	178	296	4,522	5,240
Costa Rica	0	0	0	25	0	25

*Other taxes mainly correspond to Law 99, financial tax, stamp duty, FAZNI (Financial Support Fund to Bring Electricity to Un-connected Areas), FAER (Financial Support Fund to Bring Electricity to Interconnected Rural Areas), PRONE (Network Normalization Program), regulated electricity market energy tax, contribution to CREG, among others.



Consolidated Statement of Financial Position

The total consolidated assets as at December 2018 amounted to COP 10.7 trillion, a 9% increase from 2017. The non-current assets, which recorded COP 9.3 trillion, increased 5.5% from 2017. This was mainly due to the performance of property, plant and equipment and the increase in the assets acquired under financial lease, due to the additions and capitalizations of the projects under construction, such as Plan-5Caribe, investments in power plants and new businesses for the City, Business and Home segments. In turn, current assets amounted to COP 1.4 trillion, increasing 40.2% from 2017. Their main variation occurred with the increase in cash and cash equivalents, thanks to the greater contribution due to the good performance of the businesses and the lower financial burden resulting from the management to improve the capital structure.

In equity, the earnings attributable to the controlling shareholders of the period were COP 227,843 million, compared to COP 149,147 million in 2017. In the same period, liabilities recorded COP 5.3 trillion, 1% below that recorded in 2017.

Investments and Capital Structure

In Colombia, consolidated investments of COP 598 billion were executed in 2018: 23% of which were in the power generation business, 25% in the transmission and distribution business, 27% in Plan5Caribe and the remaining amount was used for investments in technology, supporting areas and innovation projects.



In Central America, the investments made in 2018 recorded COP 19,563 million. The main part was for maintenance and improvement work in Alternegy, projects in the Gualaca power plant and the acquisition of land in Bontex. Operating and financial performance, as well as part of the use of funds from the share issuance in February last year, enabled the payment of debt in 2018, which led to a net debt / EBITDA ratio of 2.7 times, lower than the 3.2 times of 2017. Considering Celsia individually, the same ratio decreased from 6.8 times to 3.5 times.

More Colombians receive renewable solar energy in their homes.



What are Celsia's economic performance factors?

“Celsia has an interesting and diversified portfolio of energy assets, with vertical integration that provides stability and efficiency, an ambitious strategy of diversification of the business model and a tangible opportunity for growth.”

DIEGO ALEXANDER BUITRAGO AGUILAR

Energy Analyst

(Taken from the publication of Bancolombia, Celsia – New Stage of Growth)



(103-3)

How Do We Evaluate Ourselves?

The Organization’s Board of Directors has three permanent supporting committees, which propose policies and actions to improve our management. The Audit, Finance and Risk Committee is comprised of three Board members, one of which is an independent member. Its main functions include: i. know and assess the process of presentation and disclosure of financial information; and ii. analyze the financial statements to submit them for the consideration of the Board of Directors and the General Meeting of Shareholders.

The monitoring and assessment of economic performance is supported by the responsible area of the Internal Audit Department which functionally reports to the Audit, Finance and Risk Committee. This area develops an independent activity, which assesses the quality and effectiveness of the Internal Control System. Additionally, it contributes with the identification and assessment of the factors or risks that could affect the achievement of the business objectives.

Finally, the Company annually presents its management report, which includes the report by Celsia’s Board of Directors and CEO to the shareholders, the separate and consolidated financial statements and the opinion of the Statutory Auditor.



Where Are We Heading?

Short Term (0 to 2 years)

- » Strengthen the financial structure and different business processes.
- » Make progress in renewable energy power plant projects (hydroelectric, solar and wind).

Medium Term (3 to 5 years)

- » Keep executing projects in the business segments to successfully

materialize the strategy in the medium and long term.

- » Progress with energy efficiency projects and products for clients of the Home, Business and City segments.

Long Term (6 or more years)

- » Constantly take on new challenges that lead to the Organization sustainably achieving its growth strategy.



Our stakeholders benefitted:

 Employees |  Suppliers



Our People



Employees in Panama enjoy the facilities for their well-being.

Key Indicators

9.7% promotion
of our employees

34 hours of training
on average per
employee

6.49 severity rate

Why is it important?

(103-1) We believe in the power and the skills of our people to take the whole Organization forward. In Colombia, Panama, Costa Rica and Honduras, we vibrate with Celsia's culture, which has enabled us to transform the greatly regulated energy market.

Our Management

(103-2) Our human talent is essential to achieve the strategy and the BHAG. At Celsia, we generate new and better practices to have outstanding, committed and well-rounded employees both personally and professionally. Therefore, we provide culture, well-being and development programs, which increase the commitment, motivation, innovation and quality of life of our employees.

Thanks to our people, we drive each one of our businesses to provide the best experience for our clients. That is why we are one of the best places to work.



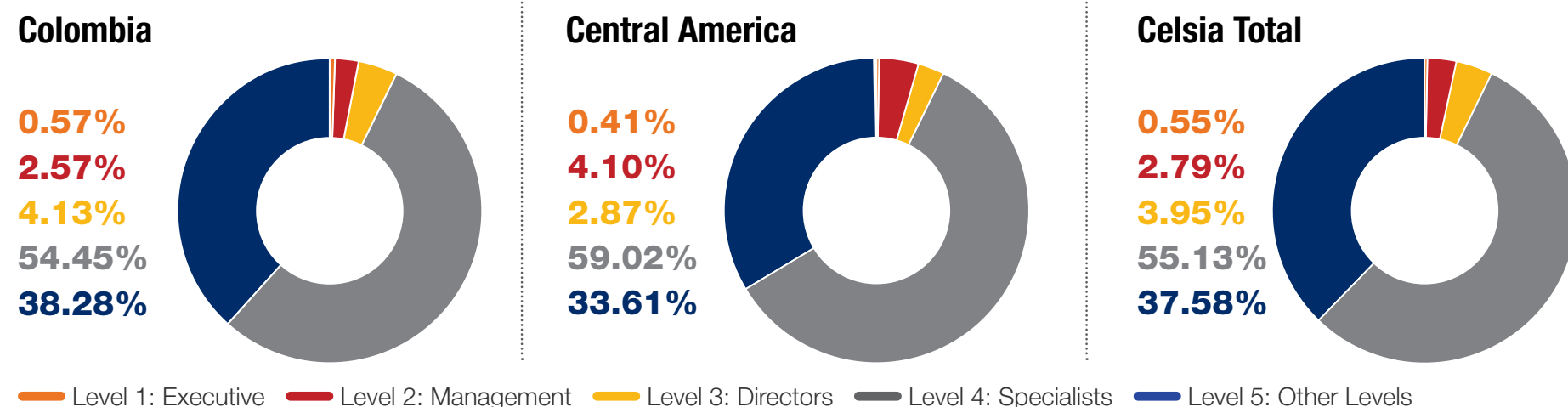
Our four pillars of culture promote the responsibility of each person with a high level of awareness and commitment to improve:



Concepts that guide our management:

- » There are no positions, only roles
» We remove the organization charts
» We eliminate forms and office doors
» We promote interdisciplinary work cells
» We have close leaders and teams that learn
» Transformation is continuous

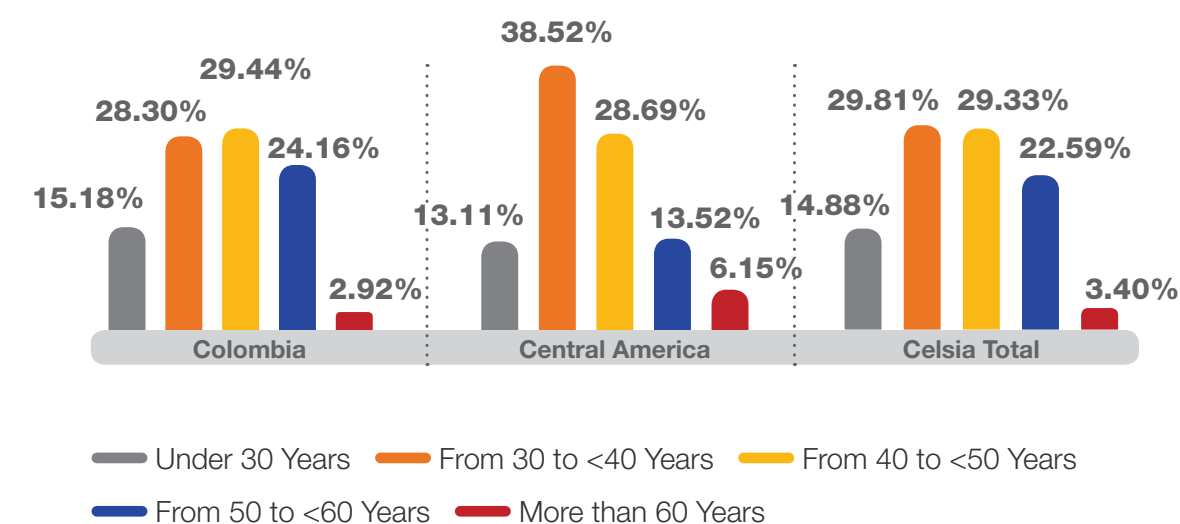
Employees by Work Category in 2018



(102-7)(102-8) Our Human Talent

General Labor Indicators	Colombia	Central America	Celsia Total
Total number of employees	1,403	244	1,647
Number of employees with a permanent contract	1,361	242	1,603
Number of employees with a temporary contract	42	2	44
Number of employees with another type of contract	54	0	54
Percentage of employees with a temporary contract	2.99%	0.82%	2.67%
Percentage of employees with a permanent contract	97%	99%	97%
Percentage of male employees	73.34%	74.59%	73.53%
Percentage of female employees	26.66%	25.41%	26.47%

(405-1) Employees by Age Group 2018





Our Results

Organizational Culture and Climate

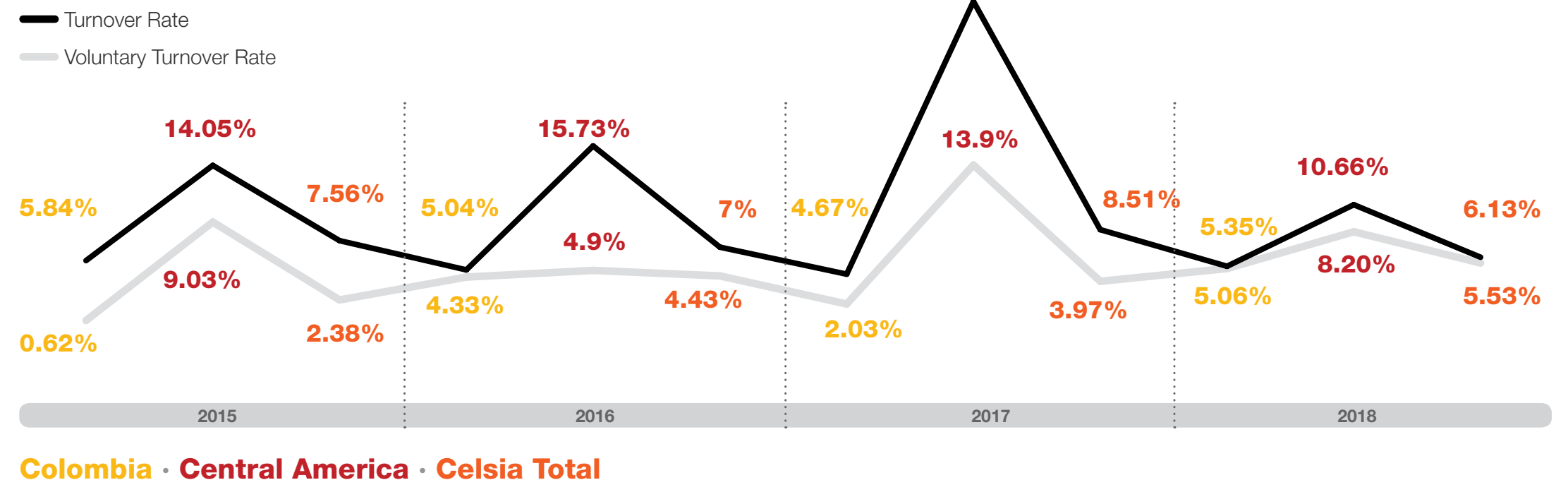
- » In the GPTW survey, we obtained an outstanding score of 84.7 out of 100 in Colombia, improving 54% from the 2017 score, and in Central America, we went from a Workplace Index of 51.6 that required attention to a highly satisfactory level of 73.1 out of 100.
- » We connected again with the “Toma la buena energía” (Take the Good Energy) program, with which we visited the Organization’s offices and facilities, so that our employees had the chance to put forward their requirements and queries, as well as finding out the different tools that support the resolution of their needs.
- » We developed different competitions as part of our process of consolidating the culture:
 - **Mundialista (World Cup):** We received 132 videos where our employees told us how they vibrate from the four pillars of our culture.
 - **CelsiaTubers:** It was implemented with the aim to have ambassadors of the culture of good energy through social networks and the digital environment. We received 14 candidates, from which five Celsia Tubers were selected.

- **Orange Leader:** 77 managers were nominated to set an example of our culture, with four key characteristics for leadership: generate trust, influence, inspire and be a culture ambassador.
- **#TrabajarEnCelsiaEsGenial (Working at Celsia Is Great):** We received 27 audio recordings, where our employees demonstrated why working at Celsia is great. We received 383 votes to select the winner.

Talent Attraction

- » We develop processes that enable us to attract and select the best talent. In 2018, 190 new employees joined the Company, mainly for the teams of the following businesses: sales, transmission and distribution, and generation. We also promoted 62 people.

(401-1) Staff Turnover Rate





2018 Milestones

- » We came in sixth place of the best companies to work for in Colombia, according to the Great Place to Work firm, climbing five places in the ranking from 2017.

» We came in 22nd place in the Merco Talento ranking, climbing four places from the previous year.

» We invested COP 16,300 million in our facilities for client and employee well-being.

» We managed to eliminate 75% and digitalize 80% of forms throughout the Company.
- » We recognized the results achieved by the different work teams, for which we paid COP 20,900 million in variable compensation to our employees in Colombia and Central America.

» We invested more than COP 14,500 million in benefits and well-being for our employees.

» We approved 31 housing loans for our employees, amounting to more than COP 2,300 million.

» We provided educational assistance to 661 children of employees.



(404-2) Training and Development

- » We reinvented ourselves as an E4 academy to plan, design and consolidate our framework for action. We managed to materialize the design and development of the learning model for Celsia, which enabled us to guide all the training and education initiatives in a standardized and cross-cutting manner, through tools for the management, design, facilitation and assessment of the programs. Additionally,

we defined the acknowledgement plan based on the accrual of points for the more than 100 thematic experts and facilitators who will be part of our academy.

» We achieved an average of 34 hours of training and an investment of COP2,581,533 per employee, recognizing the importance of generating continuous training and development strategies for our human resources.

In 2018, we carried out 11,809 online courses for all employees.



- » Together with Grupo Argos, in the program for excellence in global management and strategic implementation of Harvard University, 18 managers of our Organization had the opportunity to develop skills for the design and execution of effective and sustainable projects, strengthening their skills to address challenges with a holistic approach that enables them to drive their teams to achieve the BHAG.

» We carried out 11,809 online courses for all our employees, facilitating their learning process.
» We implemented the Mentoring program together with Grupo Argos and its subsidiaries, with the Lee Hecht Harrison firm, in which we currently have six mentees and eight mentors.
» We developed quick methods, in which five employees were trained in the Innovation Masters to then transfer their knowledge to the rest of the Organization.
- You can consult the breakdown of the Our People indicators in the Appendices section on pp. 161-173.

(404-1) Average Training Hours and Investment per Employee

Employee Category	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Level 1: executive	16.83	2	15	18	0	18	38.89	0.00	35	25.25	5	23
Level 2: management	72.3	29.83	65	47	67	53	67.26	83.60	70.67	21.47	86.3	35.57
Level 3: directors	39.46	18.3	32	60	44	56	86.70	53.43	80.41	32.67	68.4	36.53
Level 4: specialists	88.77	18.86	74	46	35	44	66.39	58.39	65	33.11	44.08	34.85
Level 5: other levels	36.23	10.16	31	24	23	24	39.96	37.10	39.53	31.78	36.4	32.41
Average training hours	58	15	49	35	31	34	54	49	53	32.40	43.8	34

(C-CT2) Average Annual Investment in Training per Employee	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2016			2017			2018		
COP	1,579,407	2,163,000	1,686,605	2,371,225	1,392,633	2,211,417	2,584,200	2,567,303	2,581,697
USD	526	721	562	795	467	741	795	790	873



Performance Management

Performance management allows us to reinforce the employees’ communication with their direct supervisor for continuous personal and professional development through acknowledgement of achievements and development plans.

In 2018, we obtained 92% participation in performance management, which is a decrease from the results of 2017. Said variation was mainly due to the non-voluntary participation of a group of employees,

who were in a collective bargaining process with the Organization.

Currently, we are implementing an action plan to increase the coverage of our 2019 performance management, with which we will deliver the tools and mechanisms to the managers that enable them to set goals for their teams, accompanied by organizational development.



Celsia employees in the program for excellence in global management and strategic implementation of Harvard University, USA.

(404-3) Percentage of Employees who Have Received a Performance Evaluation

Employee Category	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Level 1: executive	0%	No information	89%	89%	0%	89%	89%	0%	89%	100%	100%	100%
Level 2: management	89%		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Level 3: directors	89%	100%	100%	100%	100%	100%	100%	86%	97%	98%	97%	98%
Level 4: specialists	99%	100%	100%	100%	94%	99%	100%	96%	99%	93%	98%	94%
Level 5: other levels	88%	100%	95%	95%	92%	94%	94%	96%	95%	83%	100%	85%
Female	91%	100%	100%	100%	98%	99%	95%	98%	96%	94%	100%	95%
Male	93%	100%	97%	97%	92%	96%	98%	95%	98%	90%	98%	92%



Our employees' good energy is experienced in every part of the Organization.

Well-Being and Quality of Life

(401-2) We have a quality of life program that seeks our employees' work-life balance and well-being under the following dimensions:

- » **Health and Life:** Health insurance plan, life and personal accident insurance policies and the payment of 100% of the salary during sick leave as benefits that cover all our employees. We also have a comprehensive retirement preparation program.
- » **Family:** Gifts for weddings and birth of a child, events to celebrate children's day and Christmas for our employees' children, use of the Company's vacation cabins, extended maternity and paternity leave, and the financial culture and health program.
- » **Activate Your Energy:** Physical

exercise programs, sports facilities in the Company buildings, payment of 40% of the monthly physical exercise service or delivery of a sports kit, participation in internal and external sport tournaments or festivals, MTB track and Aventura Deportiva (Sports Adventure) activity.

- » **Celebrations:** Gifts on special days, such as International Women's Day, International Men's Day, Mother's Day, Father's Day, Love and Friendship Day, Christmas celebrations and birthdays.
- » **Financial:** Cellphone plan, performance bonus, and loan agreements charged to the payroll with preferential terms.
- » **More for You:** Flex-work with flexplace, flextime, flex-day and flex-family; short work day on Fridays; transportation and food

service at offices outside the urban area; parking services; coffee station; and a personal day off.

Additionally, employees who are not members of or adhered to a collective agreement have Beneflex, flexible benefits: purchasable, where they have a monthly sum of money and they choose the type of benefits that are appropriate for their point in life; and benefits to apply for, where they can apply for housing, education, vehicle and family emergency loans.

Employees who are members of or adhered to a collective agreement have benefits such as: education for the employees' children; assistance for glasses, birth of children and family funerals; non-mandatory bonuses; housing and family emergency loans; and a savings program in a mutual investment fund or a revolving housing fund.

(102-41) Employees Covered by Collective Bargaining Agreements	2015			2016			2017			2018		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Total number of employees in the Company	1,116	1130	299	1,271	286	1557	1,327	259	1,586	1,403	244	1,647
Total number of employees covered by collective bargaining agreements	826	864	125	925	115	1040	959	88	1047	1054	76	1130
Percentage of total employees covered by collective bargaining agreements	74%	76%	42%	73%	40%	67%	72%	34%	66%	75%	31%	69%



Diversity and Equal Opportunities

With the Colombian government, we signed the Sello Equipares (Labor Equality Seal) – Management System for Gender Equality agreement with the aim to progress in the formation of a new work culture that fully incorporates equality of men and women as rights subjects, as income providers for the home, as responsible for looking after their family and as engines for the country’s economic development.

(405-2) Salary Ratio for Male and Female Employees

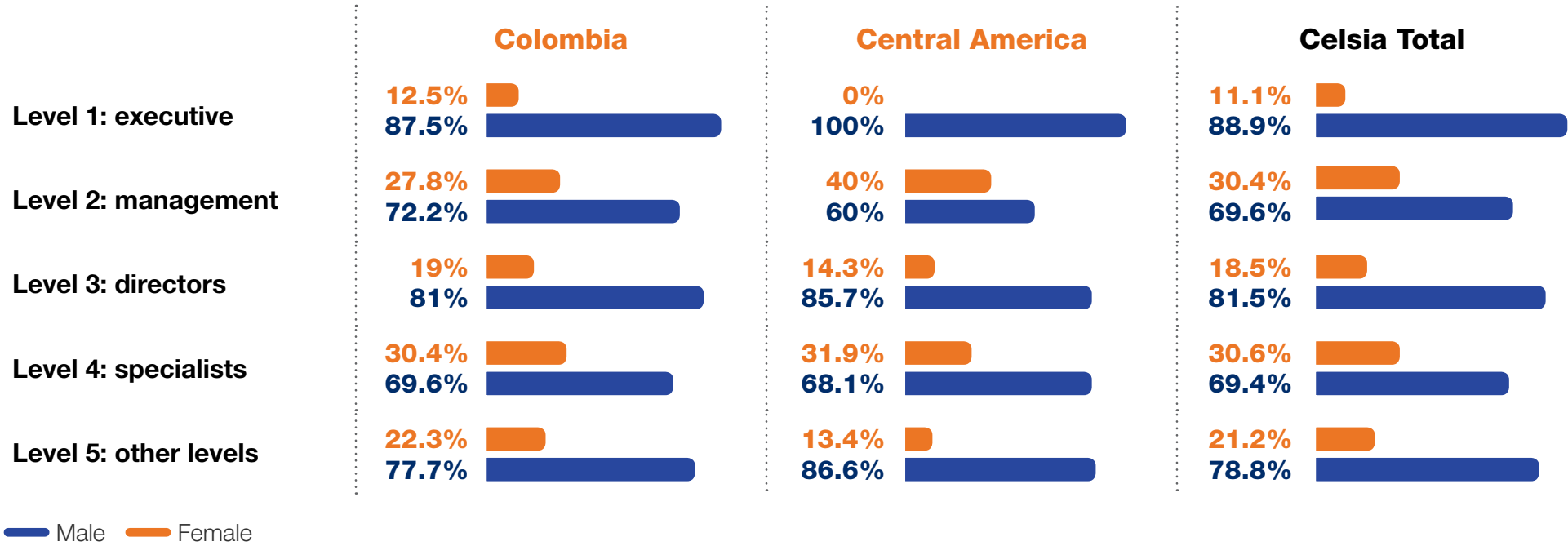
Employee Category	Colombia	Central America	Celsia Total
Level 1: executive (does not include the CEO)	1.09	Not applicable	1.14
Level 2: management	1.14	0.97	1.07
Level 3: directors	0.94	1.16	0.97
Level 4: specialists	1.02	1.13	1.04
Level 5: other levels	1.14	1.02	1.15

In Panama, we were selected as one of the ten companies to form part of the pilot program for the certification of the Gender Equality Seal promoted by the United Nations Development Program (UNDP).



Employees of Celsia's administrative headquarters in Panama.

(405-1) Gender Distribution by Employee Category





Occupational Health and Safety

“Yo Elijo Cuidarme” (I Choose to Look after myself, YEC, in Spanish) is our transformation process to make safety a life value. YEC develops activities to raise the awareness of our employees to be safer, to have clear guidelines to act in cases of risk and to provide ongoing support to our employees and contractors in occupational health and safety to increasingly ensure the Company’s sustainability.

To achieve the transformation of our culture through YEC, we have implemented the use of tools that enable us to enhance our performance and identify focuses of improvement, such as:

- » “Yo Elijo Observar” (I Choose to Observe), which aims to make preventive observations to change behavior.
 - » Operational Discipline, which aims to identify the critical tasks to standardize its implementation and the necessary controls to mitigate risk.
 - » Contractor Management Model, which aims to ensure the contractor’s performance in occupational health and safety (OHS) in all stages of its relations with our Organization.
- With the application of these tools, we achieved a 19% reduction in our lost time frequency rate from 2017 and a 35% reduction from 2016. Additionally, we carried out more

than 3,500 safety operations, generating the same amount of safety times with our colleagues, we had an impact on 167 service agreements and we made field inspections to support our contractors. Using the operational discipline cycle, we revised and standardized 78 critical tasks throughout the business to have greater control of risks. We achieved the implementation of the application for behavior observations from mobile devices, achieving greater efficiency in the capture of information and generation of indicators.

(C-CT1) Frequency and Severity Indexes

	Colombia	Central America	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Employees	2015		2016			2017			2018		
Lost time frequency rate	7.78	12.09	9.15	10.21	9.31	6.65	6.39	6.61	6.68	5.18	6.49
Severity index	65.83	0.00	72.04	219.48	93.84	30.21	11.19	27.40	32.18	18.99	30.53

	Colombia	Central America	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Contractors	2015		2016			2017			2018		
Lost time frequency rate	54.45	No information	47.05	7.37	40.28	35.11	13.32	31.11	24.73	2.64	22.77
Severity index	2,719		591.36	17,720	3,517	1855.90	103	1534	947.98	17.19	865.36

We have strengthened our governance structure in health and safety with the regular operation of the committees and subcommittees, which have carried out the improvement proposals, monitoring of the implementation and accountability of the management system tools on a monthly basis. The following teams are currently operating:

- » Central “I Choose to Look after Myself” Committee
- » Operational Discipline and Risk Management Subcommittee
- » Incident Investigation and Analysis and “I Choose to Observe” Committee
- » Contractor Management Subcommittee
- » Roundtable for the topics of communications, motivation and awareness, and competent employees.

Contractors

- » In 2018, we implemented the Contractor Management Model. This model consists of three stages to implement monitoring and assess the management of the contractors:
 1. **Before:** Preselection meeting the enabling requirements to be one of our contractors, compliance requirements

indicated in the Contractor Manuals, and assessment of the eligibility requirements in the bids submitted by the contractors.

2. **During:** The phase in which the contractor starts to implement the services and fulfillment of the requirements is monitored according to the Contractor Manual.

3. **After:** The final stage, where a comprehensive assessment is made of the contractor’s management and its occupational health and safety performance is rated.

- » For the document verification of the contractual occupational health and safety requirements, we have the Aliados Celsia (Celsia Partners) tool: www.aliadoscelsia.com, which enables us to centralize the information and facilitate the contractors’ management of the requirements to meet according to the high-risk activities they execute.
- » Giving continuity to the replicator program of YEC, this year, we integrated those responsible for occupational health and safety (OHS) in our contractor firms into the process to join efforts, helping us to maintain our commitment to safety.



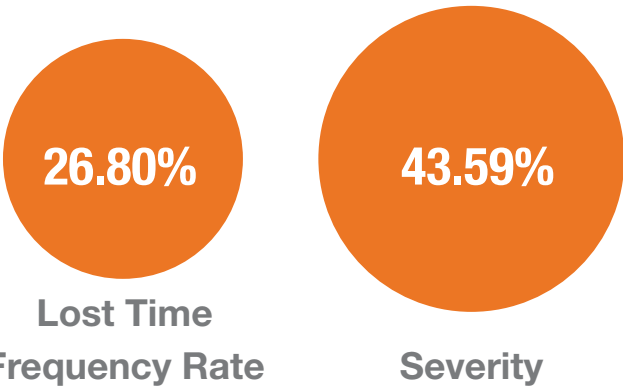
Employees of the facilities in Zarzal, Valle del Cauca.



Programs to Promote the Culture of Self-Care Among Our Contractors

- » More than 900 people who are members of their work teams in Valle del Cauca visited our facilities in Yumbo for four Saturdays to learn more about the YEC program and to internalize the importance of self-care and what this means for the quality of our service, clients and their lives.
- » We shared the leadership principles and the importance of safety as a life value in cultural transformation with the managers of 16 contractor firms.
- » Thanks to this development model, we have achieved the following reductions in our accident rates:

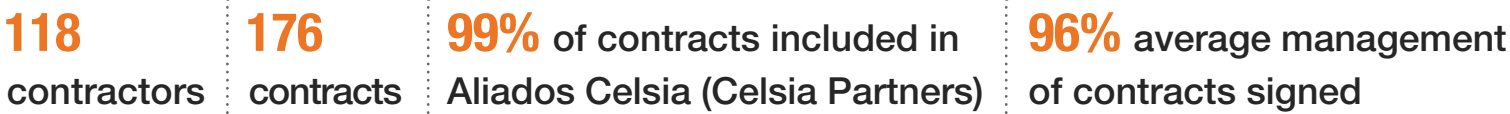
Reduction in Contractor Accident Rate from 2017



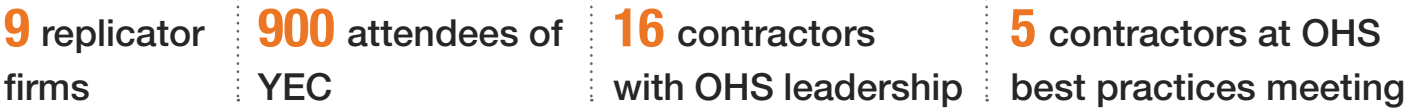
» The five companies that execute the operating distribution contract (Inelma, Deltec, Encon, Proing and Micol) shared with us their lessons learned; their best practices in occupational health and safety, which left a mark on our service in 2018; and their safety plans for 2019.

» The result of the whole management process and the development of contractors is reflected in the following figures:

Contractor Management



Contractor Development





(103-3) How Do We Evaluate Ourselves?

At Celsia, it is important to provide a solid foundation that ensures the quality of the processes aligned with the corporate strategy through our employees, who contribute to the achievement of quality goals. In 2018, we were assessed by ICONTEC, through an external independent audit with which we managed to maintain the ISO 9001 and ISO 14001:2015 certifications with zero non-compliances.

On the path of transformation toward safety as a life value, we implemented assessment mechanisms through monitoring at all stages of

the Contractor Management Model, taking into account the field and document inspections, the occupational health and safety plan and its frequency and severity indicators. This assessment is monitored on a monthly basis at the Contractor Subcommittee meeting. We also made integrated inspection visits to the most critical suppliers.

We assessed employee management through the implementation of the tools of our management system such as: number of behavior observations made, critical activity procedures disclosed and incident action plans closed.



Where Are We Heading?

Short Term (0 to 2 years)

- » Achieve internal promotion of 8% of employees.
- » Consolidate the comprehensive payment model, achieving that 100% of employees comprehensively understand their compensation, not only considering the fixed salary.
- » Continue to develop the leadership program: Toma la Batuta (Take the Baton).
- » Implement new flexible benefits according to generational preferences.
- » Continue with the YEC plan to keep reducing accident rates.
- » Implement three online courses with a tutor in real time.

Medium Term (3 to 5 years)





- » Implement 5% of the training courses with new technologies, such as augmented reality.

- » Have a quick and flexible organization with minimal paper forms that enables the generation of memorable experiences for our clients.
- » Achieve a total turnover rate of 5%.

Long Term (6 or more years)

- » Be the benchmark company of the electricity sector in Colombia in terms of occupational health and safety.
- » Be one of the best companies to work for in the electricity sector.
- » Implement the supplier development program for all our contractors.
- » Train employees on business knowledge in experience centers and simulators.

Our stakeholders benefitted:

 Clients |
  Government |
  Trade Groups and Professional Associations |
  Communities



Client Experience

Key Indicators

77.2% expresses a **positive experience** with the Celsia brand

45.6% is the probability that our clients would **recommend** us to family and friends

75.6 represents **the ease of clients' relations** with us

(103-1) Why is it important?

Clients are at the heart of Celsia's strategy. Therefore, we generate memorable experiences in each contact they have with our Organization from the analysis of their needs, individual and collective knowledge, and the development of products and services that generate value, by providing well-being to homes, facilitating productivity for companies and contributing to sustainability in cities.

We constantly interact with our clients so that their experience is easy, effective and pleasant, advising and supporting them in the pursuit of energy efficiency.

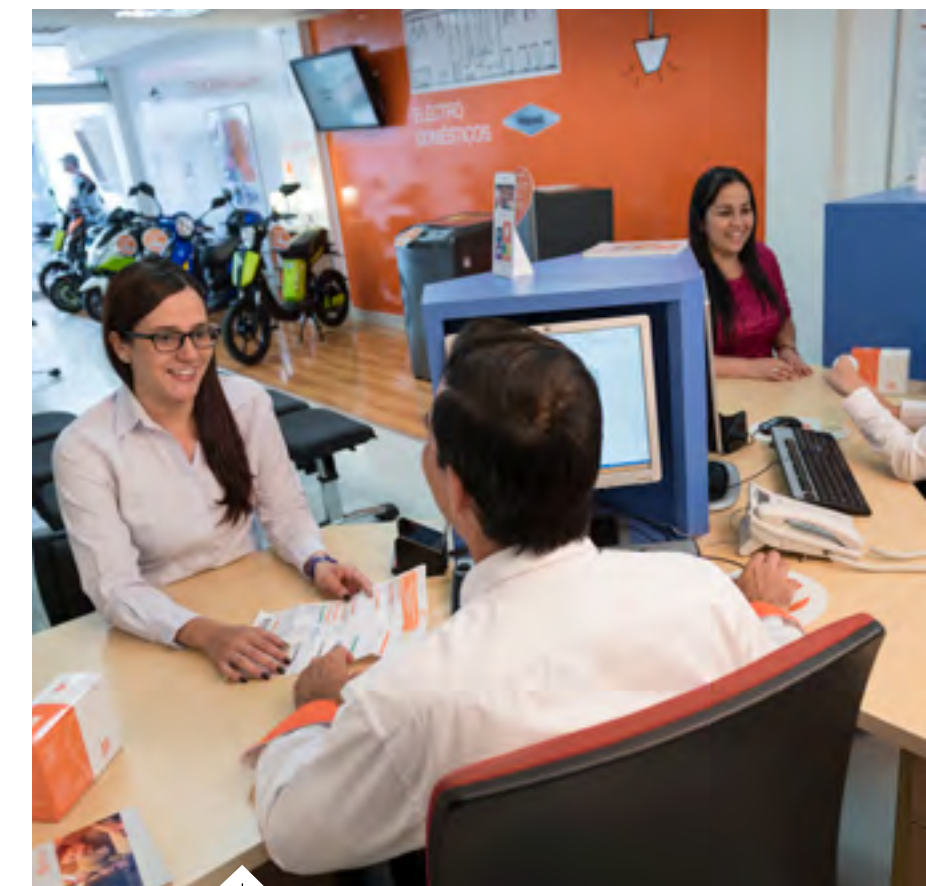
(103-2) Our Management

We aim to meet the value proposition that we have promised our clients to become their partners and advisors on electricity.

In the Business segment, we focus on energy efficiency, through the optimization of electricity solutions, self-generation of renewable energy, backup energy and asset management.

In the Home segment, we offer solutions to optimize energy consumption, facilitating access to a portfolio that includes efficient household appliances, electric vehicles, efficient lighting and other electrical items for the home.

In the City segment, we offer energy solutions that sustainably benefit cities, towns, shopping malls and free-trade zones through investment, operation and maintenance of solutions of self-generation, and efficient lighting and cooling systems.



We serve 415,837 clients through the 28 service centers located in Valle del Cauca.

(103-2, 103-3) Our Results

Businesses

- » Connection of Postobón to Celsia Solar Yumbo, the first solar farm dedicated to a company in Colombia.
- » 25 new non-regulated clients, for a total of 644 in Colombia.
- » 33.3 MWp of solar energy for Colombian companies in the contracting, installation and production phase.

- » We have 42 power plants with 17 MW in backup energy.
- » We provided the services of changing to efficient lighting in 16 offices of Sura, in Colombia.
- » In Honduras, we signed solar power contracts with two companies: 10 MWp with Cementos Argos and 4 MWp with ZIP Búfalo.
- » In Costa Rica, we installed and started up the solar system of 72 kWp for the Pozuelo company.

Home

- » Opening of the online sales channel: www.tiendacelsia.com
- » In Palmira, Valle del Cauca, we opened the first shop to sell Celsia's products.
- » Electricity supply for the first 50 households of Serena del Mar in Cartagena.

City

- » Partnerships to execute projects in more than 12 cities of Colombia with clients

such as Pactia, Terranum and Mall Plaza.

- » Serena del Mar is the first large urban center that relies on Celsia for the provision of some public utilities, such as conventional energy, solar power, backup energy, cooling district, sewage and waste disposal.
- » The first phase of installation of the solar power system (2.8 MWp) was started at El Dorado International Airport in Bogotá.



Celsia store, Palmira, Valle del Cauca.

2018 Milestones

- » In Colombia, we reached 27 clients with solar roofs –with an installed capacity of 6.7 MW– and we have 50 projects being installed, which will generate 18 MW.
- » Start of the solar power project for El Dorado International Airport in Bogotá: 2.8 MW and 10,000 solar panels, providing 12% of the airport's consumption.
- » Development of the first solar power solution for a project of 350 households in Panama: 354 KWp installed.
- » We served the first commercial and residential clients of the urban Serena del Mar project in Cartagena, in which we offer conventional energy, cooling district, backup energy, sewage and waste disposal services.



2018	Number of Clients per Product			Number of Products Sold		
(102-6) Our Products	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Home segment	16,025	0	16,025	11,499	0	11,499
Solar energy	29	5	34	29	5	34
Backup energy	26	0	26	30	0	30
Cooling districts	3	0	3	3	0	3
Efficient lighting	7	0	7	7	0	7
Electricity assets	3	0	3	3	0	3
Cogeneration	0	0	0	0	0	0
Energy efficiency	195	0	195	195	0	195
Conventional energy	623,851	16	623,867	N/A	N/A	0

(EU27) Residential Disconnection Due to Non-payment	Duration	2015	2016	2017	2018
Number of disconnections, classified by the time elapsed between disconnection of electricity and the payment agreement	Less than 48 hours	17,681	30,061	30,400	47,336
	48 hours to 1 week	9,379	25,481	15,741	18,688
	1 week to 1 month	9,812	4,782	6,155	5,202
	1 month to 1 year	4,683	17	410	79
	More than 1 year	0	0	0	0
	Total:	41,555	60,341	52,706	71,305
Number of reconnections, classified by the time elapsed between the payment agreement and reconnection	Less than 24 hours	6,370	16,891	5,269	14,467
	24 hours to 1 week	42,819	44,492	48,352	51,662
	More than 1 week	248	431	955	345
	Total:	49,437	61,814	54,576	66,474

Our Client Relations

Our client experience strategy aims to provide a quick, effective and pleasant service during each contact that our clients make with our executives and advisors. Therefore, we identify the client's needs to deliver bespoke solutions with online or personalized channels, 24 hours a day, seven days a week, which, with the support of technology, offer efficiency and speed without losing the warmth of the communication. We also provide comprehensive energy advice, which enables our clients to increase their levels of energy efficiency.

For the Company, it is essential to generate opportunities in which we have a positive impact on the lives of our clients and consolidate commercial relations. Therefore, in 2018, we carried out:

- » Family days (14) and Christmas celebrations (four) in different municipalities of Valle del Cauca, attended by approximately 24,500 people.
- » The sixth meeting with managers of 280 residential units, which comprise more than 35,000 clients.
- » Sales management with housing construction companies, supporting 124 projects, which provided 19,723 new electricity clients.

Through the 28 service centers located in Valle del Cauca, we served 415,837 clients, with an average waiting time and service of 15.25 minutes, and we resolved their queries and provided them with advice on the control of energy consumption, payment of their bills, and products that contribute to their families' well-being.

We consolidated our online services with a 30% increase in client transactions. Electronic payments increased 43%, online chats increased 56% and requests via servicioalcliente@celsia.com increased 36%. Furthermore, 3,277 clients received their bill electronically each month.

We answered 452,355 calls through the customer service hotline, of which 85% were answered in less than 20 seconds, exceeding our target of 80%.

We installed an efficient lighting project in 16 offices of Sura in Colombia.





(418-1) No requests or complaints were filed in 2018 in terms of the application of Law 1581/2012 of Personal Data Protection.

(419-1) The Organization has not received fines for non-compliance with current legislation and regulations related to the use and provision of services in energy sales.

How do we evaluate ourselves?

In addition to the perceived quality satisfaction index (ISCAL, in Spanish) of conventional energy, promoted by the Regional Energy Integration Commission (CIER, in Spanish) that we carry out every two years, in 2017, we developed our own measurement model: the external Client Experience Index of the Home, Business and City units. This index enables us to monitor who interacts with our products and how, through the online, telephone, in-person, contractor and executive channels.

We assess the client experience in four dimensions:

- » Experience or contact
- » Brand loyalty
- » Perception of positioning
- » Perception of fulfillment of the value promise

This measurement model also made it possible for us to have the global satisfaction (SAT), effort (CES) and recommendation (NPS) indicators for all the products and relations channels.

(C-GC1) Customer Satisfaction

Retail Customer Satisfaction (%)	Colombia		
	2014	2015 - 2016	2017 - 2018
Satisfaction level of residential clients	86.5%	87.6%	85.8%
ISCAL global customer satisfaction indicator (regulated clients)	84.2%	87.6%	85.8%
ISCAL customer service quality indicator (regulated clients)	86.6%	87.0%	88.4%
Global satisfaction indicator (non-regulated clients)	86.5%	86.5%	83.9%
Customer service quality indicator (non-regulated clients)	89.4%	89.1%	86.1%

ISCAL survey carried out every two years.

Wholesale Customer Satisfaction (%)	Colombia				Central America		
	2015	2016	2017	2018	2016	2017	2018
Percentage of wholesale clients surveyed	94.9%	94.9%	97.2%	38.0%	100.0%	N/A	N/A
Customer service quality indicator (non-regulated clients)	94.9%	94.4%	75.0%	100.0%	94.0%	N/A	N/A

In Central America, we plan to carry out another customer satisfaction survey for wholesale clients in 2019, from the businesses established during 2018.



Electric transit available at the Celsia store in Palmira.

Customer Service

(C-GC2) Assessed Criteria	Percentage of Customers Surveyed	
	2017	2018
Do you think that the purchase process was easy?	97.5%	98%
Do you think that the purchase process was quick?	87.5%	99%
Do you think that the purchase process was pleasant?	97.5%	99%
Do you think that the explanation received was clear?	100%	97%
Would you make another purchase from the Organization?	90%	97%
Would you recommend the Organization?	100%	96%

Customer Recommendation

(C-GC3) Client Segments Evaluated	2017			2018		
	Promoters	Detractors	NPS	Promoters	Detractors	NPS
Businesses	44.6	10.6	34	57.4	7.55	49.85
Home	98	2	96	65.1	13.65	51.45

Notes:

- The calculation formula changed for the Business segment (the Business and City segments were averaged).
- For the Home segment, we altered the calculation formula in two ways:
 1. The following subsegments were averaged: urban, rural, advisory sales and small companies.
 2. The client answer was changed from a binary option (yes/no) to a scale from 1 to 10.



Where Are We Heading?

Short Term (0 to 2 years)

- » Position ourselves as our clients' strategic energy partner with quick and different solutions, offering comprehensive and simple solutions with long-term partnerships.
- » Consolidate different businesses under development: self-generation through solar farms, electricity assets and efficient lighting, support program with residential solar power, recharging stations and internal facilities.
- » Implement financing solutions in the Home portfolio line, through tiendacelsia.com.
- » In Central America, develop and implement the backup

- energy and efficient lighting services for clients in Panama, Honduras and Costa Rica.
- » Drive the installation of electric charging stations to encourage the development of electric transit in Panama.
- » Design a new model of client segmentation to manage relations according to their needs and preferences.
- » Implement automation solutions in client relations.
- » Keep maturing our survey model: Client Experience Index.

Medium Term (3 to 5 years)

- » Position ourselves as our clients' strategic energy partner with quick and different solutions, offering

- comprehensive and simple solutions with long-term partnerships.
- » Consolidate different businesses under development: self-generation through solar farms, electricity assets and efficient lighting, support program with residential solar power, recharging stations and internal facilities.
- » Implement financing solutions in the Home portfolio line, through tiendacelsia.com.
- » In Central America, develop and implement the backup energy and efficient lighting services for clients in Panama, Honduras and Costa Rica.
- » Drive the installation of electric charging stations to encourage

- the development of electric transit in Panama.
- » Design a new model of client segmentation to manage relations according to their needs and preferences.
- » Implement automation solutions in client relations.
- » Keep maturing our survey model: Client Experience Index.

Long Term (6 or more years)

- » Keep leading the transformation of the electricity sector in Colombia and pioneer the adoption of new technology for distributed generation and energy efficiency.
- » Develop energy storage products and services for our three segments: City, Business and Home.



How would you evaluate your experience as one of Celsia's clients?





"Celsia is thinking about the new generations."

"I like the innovation and technology of the products that they offer to the market."

"We see innovation in Celsia. It is taking us on the environmental path."

Comments from the Client Experience Index survey, 2018.

Our stakeholders benefitted:

 Clients |
  Trade Groups and Professional Associations |
  Communities |
  Suppliers |
  Government |
  Non-governmental Organizations



Energy Resource Management

Key Indicators

38% increase in wind power generation from 2017

15.17% water reuse in thermal power generation in Colombia

Additional 19.51 GWh/ year of solar energy

(103-1) Why is it important?

We have witnessed the increase in the use of non-conventional renewable energy and we have not ignored this change. Recognizing that the availability of natural resources in terms of quality and quantity is essential for our operations, we have invested in a diversified, efficient energy matrix in line with the current needs of our stakeholders, having all the technology to generate the energy you want in our portfolio.

(103-2) Our Management

To turn our commitments into actions, we promote projects for the optimization of energy generation, water conservation in the areas where we operate, as well as electric power generation with alternative sources

of energy, such as solar and wind power; the use of which reduces the pressure on non-renewable sources of energy.

At Celsia, we have a water sub-policy, which describes our commitment to efficient use of the water resource and conservation of the water basins. As part of our management, we include important initiatives and projects to carry out our operations and new projects under the approach of comprehensive water resource management.



Calima hydroelectric power plant.



(103-3) Our Results

- » We implemented the remote operation of intakes, which aims to optimize the operation of the intakes of the small hydroelectric power plants in Colombia through the technology upgrade of the operating and control systems of water flows discharged through sluice gates, overflows and ecological channels. This project also enables the installation of alarm systems that facilitate the operator’s timely action in the case of diversions during the work shift.
- » In Central America, we installed flowmeters for the measurement and control of the intakes of underground water in the Dos Mares hydroelectric power plant with the aim to differentiate the use of the resource (industrial or domestic) and identify the optimization measures, according to their nature.
- » In Colombia, we keep implementing projects to improve the indicators of water use and consumption for thermal power generation. Since 2016, we have been reusing 15% of the water taken from the Magdalena River in Zona Franca Celsia and in 2018, we carried out additional projects, such as the measurement of intermediate flows and the automation of the sludge plants. These aim to individually measure the water flows that are currently reused and enable the use of a new water flow, which runs into the power plant's industrial water treatment system, reducing the demand for water directly from the river.

2018 Milestones

- » We started to operate the second solar farm in Colombia, Celsia Solar Bolívar, with a capacity of 8.08 MWh.
- » With **ReverdeC**, we achieved 2.6 million trees planted in the first two and a half years of the program.
- » In 2018, we increased our water consumption, because thermal power generation in Colombia increased from 946 GWh in 2017 to 1,393 GWh. With the implementation of water reuse strategies for power generation in Zona Franca Celsia, this year, we achieved a rate of 15.17%.
- » At the Zona Franca Celsia thermal power plant, we carried out the second phase of the energy efficiency optimization project in the generation units, through improvements of the heated parts of the combustion turbine. We achieved greater generation (5% more) with less fuel consumption (7% less natural gas).
- » In our generation matrix, we keep increasing the proportion of non-conventional renewable energy, such as wind and solar power. For this, we have progressed in the processes of licensing, construction and expansion of several projects in both Colombia and Central America, and we are developing the co-generation line.

- » We prioritized generation with natural gas and liquefied natural gas. In Colombia, we did not generate with liquid fuel and in Central America, its use was reduced by 75%.
- » At the Alto Anchicayá hydroelectric power plant (Colombia), we carried out a project to increase the efficiency of the generation units through improvements to the coverings, protection and runners. Consequently, we managed to optimize water use by 4% and contribute to the Organization's target for efficient use of resources.

(C-RE2) Water Optimized in Hydroelectric Power Generation (millions of m³)

2017	2018	2020 Target
21.10	21.10	124

- » (C-RE3) **ReverdeC**: The voluntary program for restoration of water basins, conservation and increase of the forest cover in water basins in west Colombia achieved 2.6 million trees planted in 2,200 sectors in two and a half years.

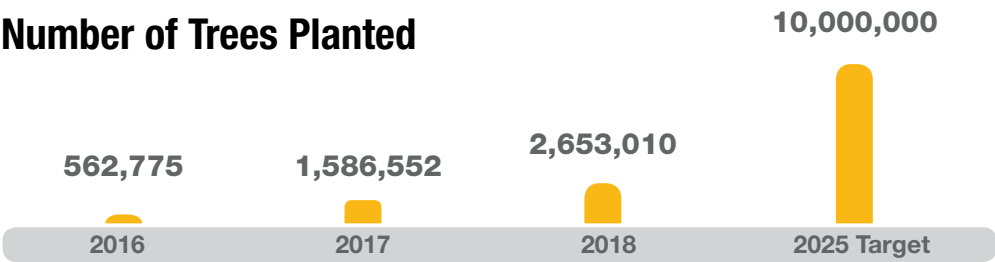
We also implemented additional conservation actions:

- » The planting of 50,000 trees with the indigenous community of the Agua Negra Reservation in partnership with the Coffee Growers’ Committee, in the area of influence of the Salvajina hydroelectric power plant.



» Intervention and planting of 135,000 trees in 14 nearby basins of four hydroelectric power plants in Valledel Cauca. We carried out this project with Fondo Agua por la Vida y la Sostenibilidad and it was implemented with local organizations and community plant nurseries.

Number of Trees Planted



(303-3) Reuse and Recycling of Water for Thermal Power Generation (millions of m³)

	2016			2017			2018		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Reused and/or recycled water for thermal power generation	0.6122	0	0.6122	0.2770	0.00	0	0.3967	0.00	0.397
Total water intake for thermal power generation	3.8	0.25	4.0470	1.80	0.24	2.04	2.6154	0.00	2.62
Percentage of reused and/or recycled water	16.11%	0.0%	15.13%	15.4%	0%	13.6%	15.2%	0%	15.2%

(303-1) Water Intake by Source

Water Intake (millions of m³)	2015			2016			2017			2018		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Total intake	7,485	4,880	12,366	6,906	5,632	12,538	10,440.27	5,823	16,264	10,636.66	5,597	16,233
Total intake from municipal waterlines	0.052615	0.29878	0.35	0.0375	0.29	0.33	0.0234930	0.23754	0	0.0392900	0.33823	0.378
Total intake from surface sources (lakes, rivers, etc., not including the sea)	7,485.2	4,880.18	12,365	6,906.2	5,632	12,538	10,440.24	5,823	16,263	10,636.62	5,596	16,232
Total intake from underground sources (not including salt water)	0.008505	0	0	0.011470	0	0	0.005	0	0	0.000494	0.10	0.1
Water returned to the source of extraction at a quality similar to or better than the water that was extracted	7,481.93	4,876.96	12,359	6,903.69	5,627.49	12,531	10,439.34	5,822	16,261	10,634.53	5,596	16,231
Total water consumption	3.30	3.51	6.82	2.55	4.71	7.27	0.93	1.24	2.17	2.13	0.44	2.57

(C-RE1) Generation Resources	2017			2018		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Hydroelectricity generated (GWh)	4,274.36	485.36	4,760	4,015.03	464.84	4,479.87
Water intake for hydroelectric power generation (m³)	10,439,519,289	5,822,384,908	16,261,904,197	10,634,189,660	5,589,752,148	16,223,941,807.54
Thermal power generated with ACPM (GWh)	0	18	18		0.67	0.67
Consumption of ACPM (includes diesel) (gal)	0	2,555,355	2,555,355	0	172,434	172,434.18
Thermal power generated with bunker fuel (GWh)	0	275.41	275	0	71.50	71.50
Consumption of bunker fuel (gal)	0	17,100,145	17,100,145	0	4,424,908	4,424,907.72
Thermal power generated with natural gas (GWh)	925.89	0	926	975.22	0	975.22
Consumption of natural gas (m³)	255,353,570	0	255,353,570	237,400,397	0	237,400,397.00
Thermal power generated with liquefied natural gas (GWh)	20.49	0	20	420.43	0	420.43
Consumption of liquefied natural gas (m³)	5,646,664	0	5,646,664	102,213,921	0	102,213,921.00
Thermal power generated with coal (GWh)	0	152	152	0	319.89	319.89
Consumption of coal (ton)	0	91,585	91,585	0	179,974	179,974.00
Wind power generated (GWh)	0	161.7	162	0	222.66	222.66
Average wind speed (m/s)	0	9	9	0	10.88	10.88
Solar power generated (GWh)	5.2	0	5	16.94	2.47	19.41
Water returned to the source of extraction at a quality similar to or better than the water that was extracted (millions of m³)	10,439.34	5,822	16,261	10,634.53	5,596	16,230
Total water consumption (millions of m³)	0.93	1.24	2.17	2.13	0.44	2.57



Words of the Former Minister of Mines and Energy during His Visit to Celsia Solar Yumbo



“Celsia is one of the companies in transformation that understands the new models, what is happening in the world and the strengths we have in Colombia. I would like to congratulate them, because they are taking risks to invest in renewable energy, which is the world’s future in energy.”

GERMÁN ARCE

Former Minister of
Mines and Energy



Where Are We Heading?

Short Term (0 to 2 years)

- » Consolidate and strengthen the **ReverdeC** program with biodiversity restoration and monitoring programs.
- » By 2019, reduce the use of water by 5% per MWh generated in Unit 4 of the Prado hydroelectric power plant.
- » Start up the small hydroelectric power plant of San Andrés de Cuerquia with a capacity of 19.9 MW.
- » Build the first wind power farm in Colombia with a capacity of 80 MW.
- » Complete the construction of weather stations and the implementation of meteorological models in the basins where we have hydroelectric power plants.
- » Implement the CMS platform for the **ReverdeC** program.
- » Incorporate another 350 and 500 MW of renewable energy into our generation matrix.

Medium Term (3 to 5 years)

- » Close the power generation cycle in the Merilétrica thermal power plant with the aim to increase its capacity and use natural gas more

Long Term

- ### (6 or more years)
- » Plant 10 million trees by 2025, through **ReverdeC**.



In the upcoming years, we aim to strengthen the **ReverdeC** program with biodiversity restoration and monitoring systems.

Our stakeholders benefitted:


Clients


Scientific and Academic Community


Employees


Suppliers



Business Diversification

Key Indicators

8.9% of the **EBIDTA** invested in **business diversification**

+ **COP 21,000** million invested in **innovation initiatives**

(103-1) Why is it important?

The electricity sector is rapidly transforming itself to a cleaner, more decentralized and more digital future. At Celsia, we are aware of the need for this transformation and so we are committed to lead it.

Although the asset management business is the Company’s main source of income, we decisively invested in innovation as the main vehicle for diversification, aiming to create new business models, offer alternative energy solutions for our clients, and improve the efficiency of our current operations. The drive of renewable energy, the digitalization of operations, the optimization of thermal systems in buildings, the widespread growth of distributed resources and the move to electric vehicles are just some examples of how we are contributing to this transformation.

At Celsia, innovation is not a company division, but a work philosophy that has impregnated the whole Organization



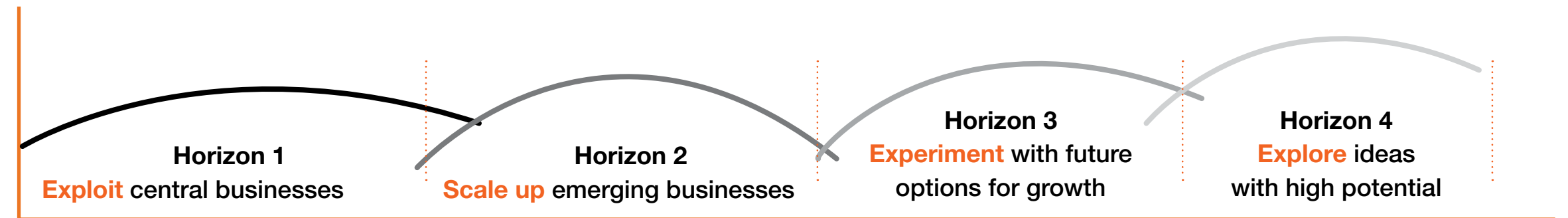
through the pillars of culture, which we have adopted in our daily work with the aim to be increasingly more competitive, attract high-quality human talent and have a positive impact on our stakeholders.

Charging station for electric vehicles at Universidad CES.

(103-2, 103-2) Our Management

Our efforts aim to provide the Company with alternatives for growth to manage the risks and maintain its competitiveness, through the development of business models based on cutting-edge technology.

According to our strategic planning based on horizons (see figure), the diversification of the business corresponds to horizons H2 and H4. Our innovation team leads the incubation of technology or business models (in H3 or H4). Once technology reaches the commercial pilot stage with clients, the key areas are gradually incorporated as product development to refine and scale up the product (H2), aiming to then consolidate it as a business in sales exploitation (H1). This is the case of CelsiaLab, which aims to serve as a laboratory for testing the different micro-network technology in order to structure new business models and operating efficiency models. Distributed solar power, efficient lighting and automation are examples of products that will supply this development process. Recognizing the importance of universities



for the industry, in 2018, we reinforced our connections with academia. We developed projects related to the new era of the electricity sector together with the universities of Valle del Cauca, Antioquia and Chile.

Additionally, we structured the Celsia Ventures program, which aims to address the diversification of the business in H3 and H4 with a different focus. This program, coordinated by Grupo Argos, aims to accelerate innovation through investments in companies at an early stage with value proposal that is relevant for Celsia's strategy, in order to harness its growth potential at early stages.





Advanced Vision Operating Center
(NOVA, in Spanish), Yumbo
facilities.

(103-2) Our Results

Energy Storage

At CelsiaLab, we develop tests on different small-scale battery storage systems. We carry out this work as part of the I+D activities of the project granted to us by Colciencias in the 2017 Tax Benefits call for proposals. The tests we conducted have enabled us to increase our knowledge about technology and identify business opportunities in different commercial segments. By virtue of this, we have progressed in the structuring of some business models for storage with industrial application, which we hope to make available to our clients in the different regions where Celsia operates.

Automation

The scope of the Building Management System (BMS) product, which initially consisted solely of a management platform of a building's electricity services, has been scaled up to all the technology solutions that enable us to operate a building's different services remotely, efficiently and safely, including security, air conditioning and access control. This product will enable us to provide comprehensive solutions, incorporating all the products of the new businesses portfolio.

In 2018, we installed the BMS in NOVA, and it is currently being implemented at Epsa's facilities in Yumbo. Additionally, for distribution, we became a Schneider Channel partner to

reach clients with competitive prices and we have strategic partners for the execution of the project. We signed contracts to offer this service to the cooling district and communications system of Serena del Mar.

Electric Mobility

Confirming our commitment to the transformation of the automotive fleet, in 2018, we started working with Sura for the development of electric mobility projects, which will become a reality in 2019.

We also installed three additional charging stations for electric vehicles in Medellín, the first four in Cali and one in Cartagena, ending the year with a total of 17 operating stations.

In terms of massive electric mobility, we structured a project to transform the MIO fleet in Cali with 26 electric buses, in partnership with a renowned operator of this city. Similarly, we are turning our operating fleet of distribution networks to electric technology.

Data Science

We started fostering the use of our different databases to turn them into actionable information with tangible benefits for the Company. We defined a system with three areas to guide our efforts on analytics: operating efficiency, client experience and new products or services.

01
The Energy
You Want

02
Letter from the
Chairman of the Board

03
Management
Report

04
Our
Actions

05
Our
Business

06
Material
Topics

07
Appendices

Economic Growth • Our People • Client Experience • Energy Resource Management • **Business Diversification** • Contribution to Society • Conservation of Ecosystems



We developed several applications, which have demonstrated the value of data as an intangible asset and the need to generate corporate education about its importance and modes of use, as well as having sufficient data architecture to carry out mass analytics. The aim for 2019 is to consolidate the initiative in the Organization, scale it up and accelerate it, aiming to generate economic benefits, even in the closest business horizons (H1 and H2).

Distributed Systems and Intelligent Networks

This line of work includes several initiatives, which are described below:

» Retail Energy Trading Platform

From the technology oversight carried out in 2017 and the training of in-house staff on blockchain technology, we designed a controlled pilot of peer-to-peer energy trading. Using Celsia's equipment, we aimed to create a retail trading market between local energy generators and consumers, without the intermediation of a central entity. Said pilot program will produce its first results in 2019, from which we will define the steps to take with this initiative.

» Micro-Network

CelsiaLab is the first step toward the goal of facilitating the development of integrated energy solutions or micro-networks. This project promotes the integration of the different services we offer in the sales portfolio to deliver greater added value

to the client. With the aim to scale up the initiative, we are studying the feasibility of implementing a pilot micro-network in our Yumbo facilities.

» Smart Lighting

We designed architecture to implement the Company's internet of things projects. We started with smart lighting in public and private areas with an intelligent management pilot project of nine lights and other connected devices using Huawei technology.

» Smart Demand Management

We developed the technology and operating capacity required to offer two new products in specific market segments: Efficient Consumption and Remunerated Disconnection.

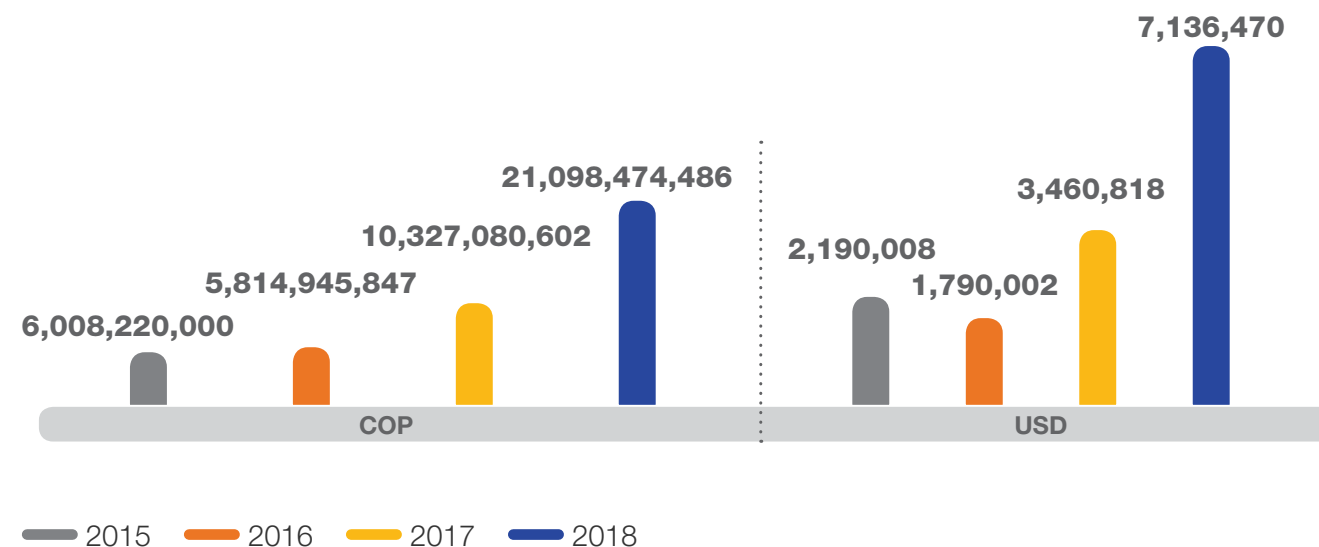


Charging station in
Serena del Mar,
Cartagena.

In the first, we implemented four pilot projects: one technical and three commercial. From the technology perspective, we made progress in different areas, particularly in the installation of more than 25,000 smart meters and in the implementation of the Distributed Energy Management System.

In the second, Remunerated Disconnection, as a value proposition for clients, we offered them payment for making some electricity available to the system through disconnection if necessary. In 2018, we registered our Yumbo facilities as the first client, which can currently operate with backup generators at critical times in which the electrical grid requires its disconnection and be paid for this.

(C-IN1) Investment in Innovation



Additionally, in 2018, we invested more than COP 79 billion in projects that consolidate the diversification of our business, such as solar farms, solar roofs, cooling districts, efficient lighting and backup energy.



How does solar energy contribute to the productivity and sustainability of your company?

“The solar power system is a way of confirming how the organization constantly strives for eco-efficiency. It is a project that strengthens our sustainability culture and adds value to us, as we managed to reduce our emissions by 1,366 tons of CO₂ per year, which gives us a competitive advantage and generates opportunities to create a better world.”

IVÁN DARÍO ARAQUE PABÓN

Engineering Manager, Compañía Nacional de Chocolates



(103-3) **How Do We Evaluate Ourselves?**

Our business diversification strategy is focused on developing the business model and ecosystem that enable it, more than on technology. Therefore, we regularly make reference to benchmarks through specialized research services, with the aim to assess our strategy and progress in light of the sector’s global dynamics.

Thanks to this analysis, we set out lines of work and define specific projects with goals and measurements. During the year, we hold monthly monitoring committee meetings on the projects with each area involved, in which those responsible present the progress, receive feedback from the manager and team, and establish activities, targets, priorities and terms. According to the level of maturity of the projects, these are presented to the Steering Committee for the purposes of information, feedback or decision. In turn, the progress and compliance of the metrics is verified by the Internal Audit Department, which reviews the evidence and issues its opinion.



Where Are We Heading?

Short Term (0 to 2 years)

- » Develop at least one industrial or commercial energy storage project in Central America.
- » Add to the current range of the sales portfolio with a backup product based on storage.
- » Keep promoting electric vehicles in the countries where Celsia operates with both public and private transportation initiatives.
- » Strengthen our efforts in data science with the start-up of specific applications that turn the Company’s data volumes into actionable information, operating efficiency or new services.
- » Include smart demand management programs

in our portfolio of the Company’s products.

Medium Term (3 to 5 years)

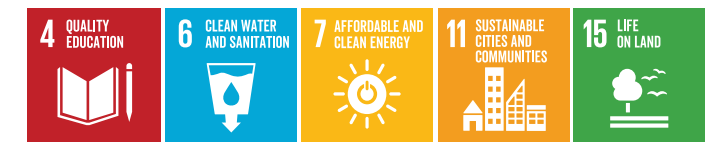
- » In Colombia, implement at least one micro-network that operates in isolation, integrating different distributed resources. For example, storage, electric transit, distributed generation and response to demand.
- » Consolidate efforts to make Celsia a technology company, achieving a high level of maturity and sophistication in the use of data and digitalization to make our operations more efficient and to offer more attractive products or services to our clients.

Long Term (6 or more years)

- » Lead the transformation of the electricity sector through the installation, coordinated management and operation in real time of distributed resources embedded in the network, using cutting-edge technology in hardware and software.
- » Consolidate the Innovation Team as a research center that facilitates the penetration of new technology in the markets of influence, strengthening and improving university-state-company relations to ensure the sustainable development of our clients.



Our stakeholders benefited:



Contribution to society

Key Indicators

100% of operating centers and projects with **socio-environmental programs.**

Over **COP 27,800** million in **social investment.**

Over **287,000** people **benefited.**



103-1 Why is it important?

We are convinced that it is important for our stakeholders, especially the communities in our areas of influence, to be our partners in the region. Therefore, building strong and long-lasting relationships based on respect, cohesiveness and transparency is the key to our social management. This is how we ensure that the participation and inclusion of stakeholders are promoted and valued in our operations as key relations lines, thereby contributing to achieving organizational objectives and managing risks in a timely and efficient manner.

Restoration of the Luis Carlos Peña School in Candelaria, Valle del Cauca.



We built a reinforced-concrete strip in Suárez, Cauca through the Obras por Impuestos (Works for Taxes) mechanism. It will benefit over 5,000 people.

Ángela Ramírez benefited from production projects supported by the Company.

(103-2) Our Management

As we express in our Social Policy, our relations strategy aims to provide the guidelines so that our actions reflect respect, transparency, trust and mutual growth, key foundations for stakeholder engagement. This endeavor is led by the Organization's socio-environmental team and by the team that comprises the foundations, and aims for relations to be two-way and to last.

In that regard, our guidelines for action are:

- » Recognize, respect and value the importance of each stakeholder, their particularities and characteristics.
- » Manage the social risks inherent to the operation.
- » Develop strategies for participation, dialog and permanent communication regarding the Company's management.

- » Prioritize initiatives for social investment that contribute to community well-being in the operation's areas of influence.
- » Promote partnerships with other organizations to carry out projects of impact for the Company and its stakeholders.



(103-2) Our Results

In 2018, social investment in Colombia amounted to COP 27,278 million: 73% in voluntary actions and 27% in mandatory actions. In turn, investments in Central America totaled USD 205,799: 97% in voluntary investments and 3% in mandatory investments. These investments were made in accordance with the lines of intervention established by our Organization and our foundations, with the intention of responding to a series of specific needs identified in the communities of the areas where we operate. Similarly, through our several programs and projects we generated direct jobs in the communities in our areas of influence, helping to improve the quality of life for these populations.

And through the Works for Taxes mechanism implemented by the Colombian government, we managed the feasibility of priority social interest projects at the zones most affected by the armed conflict. Such is the case of the highway intervention that we carried out in 2018 in Suárez, Cauca, which benefits the community from our Salvajina Hydroelectric Power Plant's area of influence.



What do you like best about our Enciende (Light Up) program?



“What I like best is seeing the children's faces, the joy emanating from them thanks to the new Normal de Jericó School. The elementary school next to them is completely transformed. Thanks to Celsia for this great partnership with our Mayor's Office that guarantees a better quality of life for these children and for this educational community, which is very happy with the transformation of their facilities”.

JORGE ANDRÉS PÉREZ HERNÁNDEZ

Mayor of Jericó, Antioquia



Infrastructure improvement at Simon Bolívar, San Carlos, Antioquia.

2018 Milestones

- » A total of 26 schools benefited from the Enciende (Light Up) Program, with spaces that have better lighting and are healthier and safer for its users. We helped 7,088 students and 262 teachers.
- » In eight municipalities in Valle del Cauca, Antioquia, Tolima and Cauca, we helped design and consolidate production projects that matched each region's agricultural activities.
- » Highway connectivity in 14 municipalities with the construction, refurbishment and maintenance of roads and bridges.
- » We helped reduce the unemployment index by enrolling over 1,500 people from the communities of direct areas of influence of our projects and power plants in operation.

In accordance with the lines of investment established by our Company and foundations, in 2018 we invested in the following activities and initiatives:

Access to Electricity

- » Thanks to our coverage plan, we expanded the energy service to 16 towns in the following municipalities in Valle del Cauca: Buga, Sevilla, Toro, Bolívar, Roldanillo, El Dovio, Caicedonia, Ginebra, Jamundí and Tuluá.

Free pet sterilization campaign in Barranquilla, Atlántico.



- » By changing the electric grid, we brought electricity to the school in the Kuna de Colón community in Panama.

Improving Quality of Life

» Infrastructure

We contributed to highway connectivity in 14 municipalities in Antioquia, Valle del Cauca, Cauca and Tolima by building, refurbishing and providing maintenance to roads and bridges, as part of the social management of our hydroelectric power plants in operation and the Porvenir II Project.

We were able to provide community spaces and infrastructure in 16 municipalities in Antioquia, Atlántico, Bolívar, Valle del Cauca, Cauca and Tolima through the design and execution of technical studies, as well as construction, refurbishment and donations.

» Health

We hosted comprehensive health events in Santa Rosa de Osos and Jericó, Antioquia, and in the neighborhoods of Siape and Las Flores in Barranquilla, Atlántico. Over 7,000 people received medical services, as well as vision, dental

and psychological care, breast cancer screening, laboratory work and spirometry procedures.

We carried out pet care and sterilization sessions in nine municipalities in Antioquia, Atlántico, Cauca, Tolima and Valle del Cauca.

We furnished biomedical equipment to the healthcare center in Las Flores neighborhood, Barranquilla, to help them provide adequate services to their patients.

We continued taking care of the medical and dental office and providing ambulance transportation services, which benefit the communities from our Alto Anchicayá Hydroelectric Power Plant's area of influence.

We contributed to improve healthcare in Chiriquí, Panama through the donation of medical equipment for the healthcare center in Las Lomas.

» Culture, Recreation and Sports

We assisted and accompanied cultural, recreation and sports events in 18 municipalities in Antioquia, Atlántico, Valle del Cauca, Tolima, Cauca and La Guajira as part of the social management of our power plants in operation and the Porvenir

II and San Andrés hydroelectric projects.

We helped with the hosting of the dairy transformation diploma graduation ceremony. This program is taught by Universidad Lasallista to the Nuevo Renacer women's association from the town of Pandeazúcar of the municipality of Donmatías, Antioquia.

We contributed ecological points for solid waste disposal to educational institutions and rural schools from the area of direct influence of the San Andrés Project.

We gave the community of Guayabo, Bagaces, in Costa Rica the Oasis Recreational Park. Through this multi-sports complex, we are contributing to the culture, recreation and sports of this population which is part of our Guanacaste Wind Farm' area of influence.

We helped make possible art and culture initiatives and spaces by sponsoring 44 activities and events in 25 municipalities in Antioquia, Valle del Cauca, Bolívar and Cundinamarca. These included the 12th Book and Culture Fair, the 6th International *Oiga, Mire, Lea* (Listen, Look, Read) International Literature Festival, and the Colombia-moda Fashion Show.

In Panama, we organized the Celsia Cup Inclusive Karate Tournament for children. The purpose of this event is to foster leadership, respect and tolerance through sports.

We were the main sponsors of the Miravalles Clean Energies Race, which is held in Guayabo, Costa Rica. The goal of the event is to offer a space for family recreation and collect funds for community activities and projects.

Community development

- » We encouraged the communities to participate actively in our programs. In the case of **ReverdeC**, 100% of the workforce and suppliers are from local communities, generating 1,800 jobs and the incorporation of 33 organizations through this.

In Suárez, Cauca, we helped professor Eduardo Lara's soccer academy.



- » We helped to generate and strengthen community capacities for the residents of San Luis, Antioquia; Barranquilla, Atlántico, Dagua, El Cerrito, Restrepo, Calima El Darién y Buenaventura, Valle del Cauca; Barrancabermeja, Santander; and Suárez, Cauca Activities included training sessions for leadership, community strengthening, community project management, social monitoring, business strategies and conflict resolution, the environment, tourism, participation mechanisms, risk management, interaction with communities, transfers from the electricity sector and human rights.



The Oasis Recreational Park for the community of Guayabo, Bagaces in Costa Rica.



We gave out
19,000 school kits
in Colombia.

- » We helped to design and consolidate production projects for agricultural activities to support food security and generate income in eight municipalities in the departments of Antioquia, Cauca, Tolima and Valle del Cauca as part of social management in our Hidromontañas, Alto Tuluá, Amaime, Bajo Anchicayá, Bajo Tuluá, Prado and Salvajina hydroelectric power plants.

Promoting education

- » We gave out over 19,000 school kits to pre-school and elementary students in educational institutions in 14 municipalities.
- » We equipped the school cafeteria at the Pedro Fermín Vargas School in the town of El Cauchal in the municipality of Dagua, Valle del Cauca.
- » We provided educational material for children with special needs in the municipality of Roncesvalles, Tolima.

Fundación Celsia and Fundación Epsa

- » **Enciende (Light Up):** made improvements to the infrastructure of 26 schools, benefiting 7,088 students and

262 teachers who now enjoy spaces with better lighting which are healthier and safer, and we started to implement the social component to raise awareness of how to care for the facilities.

- » **Verde Vivo (Going Green) Project:** we consolidated our environmental education methodology, turning it into a key program for Grupo Argos and its subsidiaries, which will be led from its foundation, and we developed a virtual platform to expand its scope and use by other teachers.
- » **Mathematics:** we expanded program coverage, reaching seven municipalities in Valle del Cauca, and we advanced in systematizing the methodology in partnership with Universidad del Valle.
- » **Language:** we consolidated our methodology, reaching 6,197 students who found a different way to read, write and speak.
- » **Corporate Volunteer Initiative:** we participated in the presentation of Conecta, the Corporate Volunteer Initiative of Grupo Argos and its subsidiaries, and implemented 12 activities with the support of 141 volunteers.

Foundations

Transformation with Good Energy

Fundación Celsia and Fundación Epsa contribute to Colombia's social development by strengthening the quality of education in the communities where the Organization is operating. In order to do so, they are working on a management model that integrates school improvement in terms of electricity and water, and the strengthening of skills for teaching mathematics, language and environmental education.

In addition, the foundations support the Conecta Corporate Volunteer Initiative, which brings together employees from Celsia, Grupo Argos, Argos and Odinsa. Under this corporate initiative, we inspire, transform, and give life to community dreams through the transfer of knowledge, reforestation and education infrastructure improvement programs.

More than

99,513 people and 332 educational institutions

benefited from the Foundation's programs

The investment surpassed COP 9,858 million

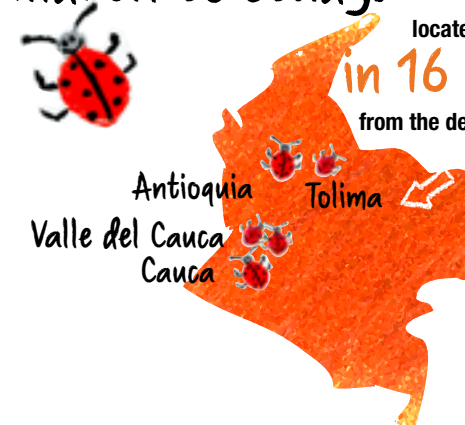


Thanks to the Enciende (Light Up) Program,

they now have spaces that have better lighting and are healthier, safer and appropriate for children to study.

26 educational institutions

located in 16 municipalities from the departments of



We assisted 7,088 students and 262 teachers



Voices filled with excitement



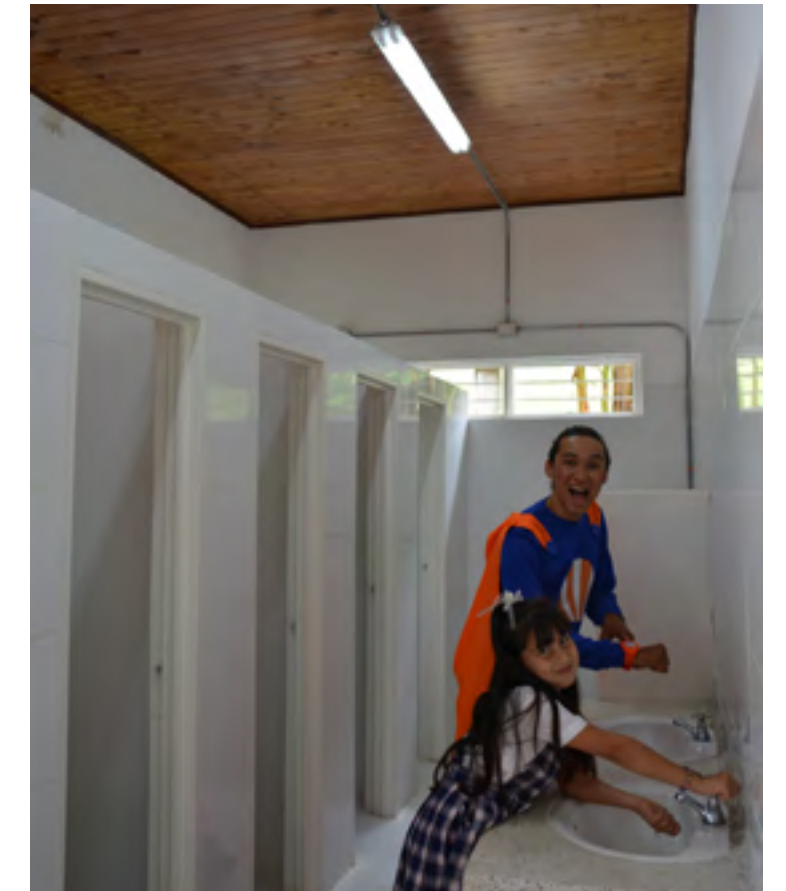
This is how the renovated San José School looks today: paint, bathrooms, new walls and happy children to attend the school.



We are deeply grateful. We have totally restored bathrooms, cafeteria and kitchen. And the electric power grid is regulated so it doesn't damage the equipment. These children, who are from a rural area, deserve a school like this one; we were about to close it. It has been a great blessing."

ÁYMER PEREIRA GONZÁLEZ,
principal at the San José School.

The San José School in the municipality of La Victoria in Valle del Cauca is one of the 26 institutions that benefited. This school was about to close its doors because the facilities were neither safe nor healthy for the 44 primary students and 3 teachers. At present, the school has a new cafeteria and kitchen, restored bathrooms, an electric power grid, a refurbished office area and restored pre-school floors. And as a final touch, fresh paint on the walls. It's as good as new!





We expanded program coverage, reaching seven municipalities in Valle del Cauca, and we advanced in systematizing the methodology in partnership with Universidad del Valle.

The Math Program helps to improve school performance

Verde Vivo (Going Green) Project took flight

We developed a virtual platform to expand the scope and use of the program for teachers, and we consolidated our environmental education methodology, by turning it into a key program for Grupo Argos and its subsidiaries, which will be led from its foundation.



Through hard work, the Language Program was consolidated

With an innovative methodology, **6,197 students** found a different way to read, write and speak in the classroom.



We participated in Conecta, the Corporate Volunteer Initiative of Grupo Argos and its subsidiaries, with 12 activities supported by 141 volunteers.



Our Social Investment

2018	Colombia		Central America		Celsia Total	
Social Investment of the Organization by Line of Action	COP	USD	COP	USD	COP	USD
Access to energy	502,567,380	169,991	50,601,699	17,115.81	553,169,079	187,107
Quality of life	12,747,357,742	4,311,740	418,964,249	141,713	13,166,321,990	4,453,453
Community development	3,751,610,118	1,268,966	2,392,757	809.34	3,754,002,875	1,269,776
Promoting education	8,696,330,224	2,941,497	136,473,049	46,161.43	8,832,803,273	2,987,658
Administrative expenses	1,580,498,309	534,597	0	0	1,580,498,309	534,597
Total	27,278,363,773	9,226,791	608,431,754	205,799.46	27,886,795,527	9,432,590

2018	Celsia Total			
Mandatory vs. Voluntary Social Investment	Mandatory	Voluntary	COP	USD
Colombia (COP)	7,431,865,227	19,846,498,546	27,278,363,773	9,226,791
Central America (USD)	5,922.54	199,876.92	608,431,754	205,799.46

2018	Colombia	Central America	Celsia Total
Beneficiaries of Social Investment by Line of Action			
Access to energy	75	2,033	2,108
Quality of life	92,324	57,678	150,002
Community development	15,886	28	15,914
Promoting education	114,602	4,820	119,422
Total	222,887	64,559	287,446

You can consult the breakdown of the Contribution to Society indicators in the Appendices section on pp. 174-178.



(103-3) How Do We Evaluate Ourselves?

Our contribution to society is assessed through various means, which include:

- » Requests and complaints mechanisms implemented at the power plants and projects.
- » On-going dialog with the communities.
- » Participation by the communities in the areas of influence in different socio-environmental studies conducted in our projects' areas of influence.

- » Prior consultations are the mechanism that materializes a fundamental right of the ethnic communities, which in turn, serves as a space to participate and assess our contribution to Society.
- » Celsia is subject to various audits throughout the year.



Our community engagement is conducted by professionals in our operations' areas of influence.



Where Are We Heading?

Short Term (0 to 2 years)

- » Make progress in the standardization of social management practices between Colombia and Central America on issues such as policies, guidelines, processes, procedures and lines of investment.
- » Implement the impact indicator pilot program in some of our power plants.
- » Develop social benefit projects through the Works for Taxes modality.
- » Prepare a publication that contains the operating guide and the work units of the Language Program to strengthen teaching skills in this area.
- » Prepare a publication on the Mathematics Program that presents the program and the

findings and lessons learned during the three years of implementation.

Medium Term (3 to 5 years)

- » Formulate and implement a methodology to measure outside events that will help us economically assess the impacts of our operations in the territories.

Long Term (6 or more years)

- » Monitoring of and compliance with all of the prior consultation agreements the Company has validated.
- » Implement social strategies in line with the Organization's Social Policy that enable strengthening of relations with social actors in the areas where we carry out our operations.



Our stakeholders benefitted:

Clients |
 Trade Groups and Professional Associations |
 Communities |
 Suppliers |
 Government |
 Non-governmental Organizations



Conservation of Ecosystems

Environmental Management



Woodpecker sighting in the forests of the Calima hydroelectric power plant, Valle del Cauca.

Key Indicators

71% increase in the Company's **environmental investment**

More than **COP 26,000** million in **transfers** of the electricity sector in Colombia

98.3% certified generation capacity with ISO 14001: 2015

(103-1, 102-11)

Why is it important??

At Celsia, we understand that to be sustainable, we need to contribute to the conservation of natural resources. Therefore, we always apply the principle of precaution to our activities and actions. Additionally, we give our best to execute our production processes, taking into account our stakeholders' expectations.

Below, we share the actions we are carrying out for rational use of natural resources, the prevention, mitigation and offsetting measures for environmental impacts resulting from our operations, and voluntary investments in protecting the ecosystems.

(103-2) Our Management

In our Environmental Policy, we establish the guidelines for action for our stakeholders, covering our operations, products and services, energy distribution processes, waste management, suppliers and contractors, as well as the operations managed by third parties and the due diligence processes.

In said document, we define the commitments we want to achieve in the medium and long term, from which we highlight the diversification of the generation matrix, increasing the proportion of non-conventional renewable energy; the improvement of the assets' operating efficiency; conservation of the water basins; and support of biological research.

Children actively participate in our voluntary tree planting sessions.



Our Results

- » Environmental investment amounted to COP 56,407 million with initiatives carried out in Colombia such as **ReverdeC**, Huella Viva, research agreements with universities and improvement of the energy efficiency of Zona Franca Celsia, where we invested more than COP 19,000 million in improving the technology of the combustion system. While in Central America, we executed projects for the control of SF₆ (sulfur hexafluoride) leaks and noise modelling, measures for the control of atmospheric emissions, and reforestation projects.
- » We obtained the ISO 14 001: 2015 certification from ICONTEC for the Zona Franca Celsia thermal power plant (Colombia), which increased the coverage of the Environmental Management System to 98.3% of the Company's generation capacity in all the countries where we operate.
- » At the Dos Mares hydroelectric power plant in Panama, we implemented integrated software for SCADA (supervision, control and data acquisition), which determines the flow volumes from the levels in the dams. In this way, we automated control of the water volumes that correspond to the ecological flows and we achieved the goal set in 2017 to install control systems.
- » In the construction of the San Andrés small hydroelectric power plant, the environmental investment focused on implementing the management measures, in which the rescue and relocation of orchids, bromeliads and tree ferns stand out, as well as the removal, rescue and relocation of wildlife.
- » With respect to the requests, complaints and claims, in 2018, there was a total of 18 complaints on environmental issues and topics related to the operation of assets and the construction of new projects, which were managed under the Company's service procedure. None of them have led to investigation processes or environmental proceedings. (See Contribution to Society chapter, socio-environmental claims indicator.)
- » In 2018, the standardization process of environmental management practices between Colombia and Central America progressed in the standardization of some reporting formats, compliance control and the update of legal requirements.



Environmental Education Resources

Our employees strengthened their knowledge on topics such as ecological restoration, efficient water use and saving, climate change management, biological risk and handling of exotic species. In 2018, 35 employees participated in these sessions, which are carried out in addition to the induction processes we carry out in the Company. The investment amounted to COP 38 million.

Voluntary Resources

The voluntary initiatives and agreements include the resources allocated to the **ReverdeC** water basin conservation program and the partnership with Universidad ICESI to encourage biological research on the Anchicayá River basin. The investment was USD 5,114 million.

Resources for Procedures, Permits and Taxes

The COP 17,608 million invested in this line correspond to the implementation of measures of the environmental management plans, monitoring and forest offsetting fees, environmental assessments, licensing processes and development of research for the conservation of biodiversity, biological

2018 Milestones

- » In Colombia, we increased the electricity sector transfers by 23%, from COP 21,459 million in 2017 to COP 26,477 million in 2018. These resources are delivered to the municipality and to the regional autonomous corporations with jurisdiction in the basins that supply our power plants (see own transfer indicator).
- » We obtained tax benefits through programs and projects, such as Smart Demand Management, solar farms and roofs, and **ReverdeC**. These resources leverage the development of other energy efficiency initiatives, environmental conservation and electric power generation with non-conventional renewable energy sources.
- » In 2018, for the transmission and distribution business, we obtained two environmental licenses for the

execution of the Norte and Caracolí substation projects, and we progressed with the implementation of the forest management and offsetting measures of the Manzanillo project. Additionally, we complied with 95% of the agreements registered with the Community Council of Black Communities (CCCN, in Spanish) of Bayunca, as part of the prior consultation carried out for this project.



Community planting session carried out in the municipality of Trujillo, Valle del Cauca, as part of the **ReverdeC** program.



connectivity, and restoration of the basins of the Samaná Norte and Claro rivers in the regions of Eastern Antioquia and Antioquia Middle Magdalena; a study we conducted with the Alexander Von Humboldt Biological Resources Research Institute.

Electricity Sector Transfers

In Colombia, the transfers amounted to COP 26,476 million, which correspond to a percentage of the gross sales of the energy generated in our 23 power plants. The increase occurred because of the regulatory changes for the calculation of the rate. These resources need to be invested by the municipal administrations and environmental corporations in projects for basic sanitation and protection of water basins.

In Central America, the paid line item of fees for use of water for electric power generation amounted to USD 196,575. This amount is calculated based on the water intake volume for power generation and it is paid to the Ministry of the Environment of Panama.

(C-GA1) Transfers or Payments of the Electricity Sector for Water Use (by Power Plant) Millions of COP



2018	Colombia		Central America		Celsia Total	
(103-2) Environmental Costs, Expenses and Investments	Millions of COP	USD	Millions of COP	USD	Millions of COP	USD
Solid waste	1,880	636,037	348.70	117,947	2,229	753,984
Atmospheric emissions	48	16,337	461.40	156,083	510	172,420
Noise	178	60,309	43.10	14,565	221	74,874
Efficient water use	7,215	2,440,579	5.80	1,979	7,221	2,442,557
Discharge	1,700	575,018	193.40	65,403	1,893	640,421
Efficient use of energy	19,803	6,698,281	0.00	0	19,803	6,698,281
EMS (environmental certifications and green purchases)	553	186,982	85.30	28,860	638	215,842
Insurance	0	0	0.00	0	0	0
Spills	0	0	76.50	25,876	76	25,876
Environmental education and training	12.40	4,194	26.00	8,794	38	12,988
External services	1,704	576,371	687.80	232,641	2,392	809,012
Research and development (voluntary and mandatory agreements)	447	151,196	0.00	0	447	151,196
Additional expenses to install cleaner technologies	0	0	0.00	0	0	0
Permits, processes and taxes	17,608	5,955,832	638.70	216,049	18,247	6,171,881
Administrative expenses (transfers, travel expenses, accommodation, and operating expenses, excluding personnel costs)	143	48,369	0.00	0	143	48,369
Voluntary initiatives	5,114	1,729,789	0.00	0	5,114	1,729,789
Total environmental costs, expenses and investments	56,407	19,079,295	2,567	868,195	58,973	19,947,490



(103-3) **How Do We Evaluate Ourselves?**

We assess our environmental management with multiple tools, which enable us to control and mitigate the impacts that our operations generate on the environment.

We have internal and external audit processes, developed by independent third parties, who appraise our procedures according to international standards, such as ISO 14000: 2015. We also carry out legal compliance assessments that enable us to mitigate risks and identify opportunities, and we participate in international surveys, such as the Dow Jones Sustainability Index, in which we obtained highly satisfactory results in risks related to water, climate strategy and environmental management.

Finally, we verify achievement of the socio-environmental goals that we have set ourselves in the short, medium and long term, which you can consult with their respective monitoring at the following link.

 For more information about the environmental goals, please [click here](#).



During the construction of the small hydroelectric power plant in San Andrés de Cuerquia (Antioquia, Colombia), we rescued and relocated orchids, bromeliads and ferns.



Where Are We Heading?

Short Term (0 to 2 years)

- » Renew the water concessions for the Alto and Bajo Anchicayá hydroelectric power plants in Colombia.
- » Complete and close the prior consultation processes

for the creation of the Environmental Management Plan with the communities of the Salvajina hydroelectric power plant.

» Progress in the implementation of the Environmental Management

Plan of the San Andrés small hydroelectric power plant.

» Certify 100% of our generation with ISO 14001.

Medium Term (3 to 5 years)

- » Standardize the environmental management




for all of Celsia’s operations in Central America.

Long Term (6 or more years)

- » Certify the transmission and distribution business in Colombia under the ISO 14001:2015 standard.



Our stakeholders benefitted:

 Clients |  Communities |  Government



Conservation of Ecosystems

Climate Change

Key Indicators

Emissions of CO₂eq were reduced by 3,220 tons due to the installation of solar roofs in Colombia

Emissions of CO₂eq were reduced by 61,376 tons in Guanacaste wind farm

(103-1) Why is it important?

Our Company acknowledges and manages the challenges of operating in a changing environment. Therefore, the consequences of climate change for the ecosystems and for the availability of natural resources is a priority for the Organization. Consequently, every year, we aim to reduce the environmental impact related to atmospheric emissions, investing significant resources in the diversification of the generation matrix.



Sunset at Guanacaste wind farm, Costa Rica.

(103-2) Our Management

We have established a long-term target to reduce the intensity of greenhouse gas emissions (ton CO₂/Gwh) from electric power generation 25% by 2025 (2015 as the base year). This involves investing in the diversification of a clean and safe energy matrix that enables us to be efficient and meet the commitments acquired for the protection and conservation of natural resources and the needs of our stakeholders.

(103-3) Our Results

Greenhouse Gas (GHG) Emissions

- » Start-up of the second solar farm in Colombia: Celsia Solar Bolívar, with a capacity of 8.06 MW. Through this, we demonstrated our strategy based on the growth of non-conventional renewable energy. With this solar farm, we prevent the emission of 3,971 tons of CO₂eq.
- » We keep strengthening new businesses with the installation of 27 solar roofs. In Central America, we carried out the process of obtaining the environmental license for the Celsia Solar Comayagua project (Honduras), with a capacity of 10.6 MW, and we acquired the Divisa solar farm (Panama), with a capacity of 9.9 MW. These projects contribute to the diversification of our energy matrix and demonstrate the Company's commitment to achieving the goal of reducing emissions.
- » We progressed in the processes of obtaining the environmental permits to increase the installed capacity of Guanacaste wind farm in Costa Rica.
- » We maintained the C category (*Awareness*) in the CDP report, an international initiative that requests that companies publish information about their strategy and performance in topics of climate change, which demonstrates the Company's management of these matters.
- » We launched *AMOVilizarte*, the sustainable mobility program to reduce our carbon footprint related to employee transportation. Through the *La Bici Me Mueve* (My Bicycle Moves Me) component, we achieved 27,213 km traveled



Racafé in Huila produces coffee with clean and renewable energy.

and prevented the emission of 4,273 kg of CO₂.

- » Aligned with the plans and policies of the Colombian government, we have carried out projects to improve the heat rate of the Zona Franca Celsia thermal power plant. This action increases the efficiency of the use of fossil fuels and contributes to the country's target to reduce greenhouse

gas emissions and achieve the commitments of COP21.

- » In 2018, thanks to our wind and solar power generation, we managed to prevent the emission of more than 68,000 tons of CO₂eq.
- » We have five electric vehicles available: two in Medellín, two in Cali and one in Panama for the use of our employees. These vehicles



Electric charging station at
Universidad Javeriana de Cali,
Valle del Cauca.

- » traveled a total of 56,000 km, preventing the emission of 13 tons of CO₂eq into the atmosphere
- » We have launched a network of 17 charging stations for electric vehicles, which make 36 connectors available and three charging protocols. In total, there were 3,191 sessions, which delivered 15,076 kWh of electricity

—sufficient to travel 75,381 km—, preventing the emission of around 11.3 tons of CO₂eq into the atmosphere since 2017.

- » We installed 27 solar roofs in Colombia, in Medellín, Cali, Bogotá, Rionegro, Tuluá, Palmira, Neiva, Envigado and Cartagena. With them, we prevented the emission of a total of 3,220 tons of CO₂eq.

2018 Milestones

- » In 2018, we issued COP 70 billion in green bonds, with Celsia being the first Colombian company in the sector to use this project financing mechanism. These funds will mainly be used for non-conventional renewable energy projects.
- » Guanacaste wind farm received the first Blue Flag in the Climate Change category,

obtaining the highest score: four white stars and one green star, as a result of its constant concern to protect the natural environment and for its corporate social responsibility.

- » We invested more than COP 19,000 million to improve the heat rate of the Zona Franca Celsia thermal power plant (Colombia), which enabled more efficient use of the fuel used.

- » We installed 17 vehicle charging stations in Colombia and Central America.
- » We purchased two electric buses for the Massive Transportation Service (MIO) in Cali, Colombia.



(305-5) Reduction of Greenhouse Gas Emissions

Initiative	2018			
	Tons of CO ₂ eq Reduced or Prevented	Base Year for Calculation of the Reduction	Indicate Whether the Reduced or Prevented Emissions are from Scope 1, 2 or 3	Indicate the Gases Included in the Calculation
Colombia				
Solar roofs in Colombia	3,220	2,018	Scope 1	CO ₂
Solar farms	3,971		Scope 1	CO ₂
Electric vehicles	13		Scope 3	CO ₂
Charging stations	10.52		Scope 3	CO ₂
Central America				
Emissions reduction certificates in Guanacaste wind farm	61,376	2,018	Scope 1	CO ₂
Total	68,567			

(305-1/305-2) Direct and Indirect Greenhouse Gas Emissions

Direct and Indirect Greenhouse Gas Emissions (tons of CO ₂ eq)	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
	Colombia				Central America				Celsia Total			
Scope 1 emissions	1,770,277	1,473,742	520,707	677,072	1,087,525	1,017,770	446,301	481,611	2,857,802	2,491,512	967,008	1,158,683
Scope 2 emissions	62,957	51,295	22,271	30,183	102	76	63	1,582*	63,059	51,371	22,334	31,765
Scope 1 and 2 emissions	1,833,234	1,525,037	542,978	707,255	1,087,627	1,017,846	446,364	483,193	2,920,861	2,542,883	989,342	1,190,448

* Note: There was an increase in the Scope 2 emissions in our operations in Central America, due to the grid’s greater energy consumption.



(305-4) Emissions Intensity

Intensity of Greenhouse Gas Emissions (tons of CO ₂ eq/GWh)	2015	2016	2017	2018	2015	2016	2017	2018
	Colombia				Central America			
Total power generated (GWh)	6,145	5,597	5,226	5,429	1,607	1,528	1,093	1,082.47
Intensity of Scope 1 emissions	288.1	263	100	124.7	677	666	408	445
Intensity of Scope 2 emissions	10	9	4	5.5	0.06	0.05	0.06	1.46
Intensity of Scope 1 and 2 emissions	298	272	104	130	677	666	408	446



Intensity of Greenhouse Gas Emissions (tons of CO ₂ eq/GWh)	2015	2016	2017	2018
	Celsia Total			
Intensity of Scope 1 and 2 emissions (tons of CO ₂ eq/GWh)	377	357	157	183

Note: The values for 2018 are in the process of calculation and external verification by an independent third party. In the event of alterations, they will be reported on the website: www.celsia.com

With respect to the 2015 baseline, the reduction in the emissions intensity was 54%, which is due to the diversification of the Company’s generation matrix. However, compared to 2017, there is an increase due to the rise in thermal power generation in Colombia and Central America for backup of the electric grid.



Other Atmospheric Emissions

- » We keep operating with natural gas and liquefied natural gas in our thermal power plants in Colombia, preventing the generation of SOx atmospheric emissions, which are mainly produced by the combustion of liquid fuel.
» In Central America, we invested more than

USD 108,000 in SF₆ emissions control projects in the Bahía Las Minas thermal power plant in Panama.

» We have replaced 85.64% of the cooling systems with R22 refrigerant gas on the Organization’s facilities.

(305 -7) Nitrogen Oxides, Sulfur Oxides and Other Air Emissions (tons)	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Total SOx emissions	94.61	4,031.05	4,125.66	47.87	2,796.54	2,844.42	0	2,349.31	2,349.31	0	2,188	2,188
Total NOx emissions	641.80	1,863.54	2,505.35	580.44	1,484.21	2,064.64	444.30	953.28	1,397.58	624	1,394	2,018
Total PM emissions	0.66	356.21	356.87	30.22	474.15	504.37	23.97	497.45	521.42	35	122	157
Total SF ₆ emissions	0.06	0.08	0.15	0.04	0	0.04	0.06	0.14	0.19	0.104	0.140	0.244
Total direct mercury emissions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total waste generation of ash and plaster dust	N/A	No information	No information	N/A	27,403.00	27,403.00	N/A	4,768.8	4,768.80	N/A	12,032.2	12,032.2

- » Our operations in Colombia did not generate SOx emissions in 2018, because the thermal power generation only used natural gas.

» The increase in SF₆ emissions in Colombia is due to the refills of new equipment that contains this refrigerant gas.

» The increase in NOx emissions is due to greater consumption of natural gas, because of the increase in thermal power generation in Colombia.

Where Are We Heading?

Short Term (0 to 2 years)

- » Certify the solar and wind power plants of Colombia with the voluntary carbon markets.
- » Renew the credit terms of the Clean Development Mechanism (CDM) projects we have in Colombia.
- » Implement projects for electric power generation with biomass.

Medium Term (3 to 5 years)

- » Increase wind and solar power generation.
- » Reduce 100% of R22 refrigerant gas emissions by 2020 (cooling systems) in Colombia.

Long Term (6 or more years)

- » In all our operations, achieve a 25% reduction in the emissions intensity (tons of CO₂eq/GWh) by 2025, from the base year of 2015.



Our commitment is to strengthen sustainable mobility with new charging stations in Colombia and Central America.



Our stakeholders benefitted:

Clients |
 Trade Groups and Professional Associations |
 Communities |
 Suppliers |
 Government |
 Non-governmental Organizations



The maintenance carried out on the Zona Franca Celsia thermal power plant optimizes electric power generation and increases the efficiency and power of the generator.

Conservation of Ecosystems Eco-efficiency

Key Indicators

16 MWh reduction in energy consumption thanks to the installation of LED lights

100% of the non-hazardous waste we generated was recycled

(103-1) Why is it important?

At Celsia, we offer an innovative portfolio in which we contribute new services that promote and ensure the availability of natural resources for future generations and at the same time, ensures the sustainability of the businesses and improves our competitiveness in terms of reducing costs and socio-environmental impact. Therefore, we implement best practices in our production and management processes, designed for energy saving, adequate discharge management, correct disposal of solid waste, among others, to ensure compliance with current legislation and adherence to the international voluntary initiatives in which we participate.

(103-2) Our Management

In our Environmental Policy, we establish guidelines for efficient management of natural resources in all operations. In them, we take into account the stakeholders, demonstrating to them the correct use of resources through compliance with the established short, medium and long-term socio-environmental goals.

To see the goals, please }

Our Results

- » The maintenance carried out on the Zona Franca Celsia thermal power plant resulted in the optimization of electric power generation, by increasing the efficiency and power of the generator.
- » In the results of PCB (polychlorinated biphenyl) management at the 2018 International Environment Fair, the Ministry of the Environment and Sustainable Development and the United Nations Development Programme acknowledged Celsia for its national participation and contribution through the “Development of National Capacity for the Environmentally Sound Management and Disposal of Polychlorinated Biphenyls (PCBs)” project between 2013 and 2018.
- » The Zona Franca Celsia thermal power plant has a biological treatment plant to purify domestic wastewater, in which, through an aeration process, the microorganisms attach to some small floaters (carriers), creating a thin film around them called biofilm. These small structures are suspended in the reactors and that is where the organic matter present in the wastewater is removed. In this way, we keep reusing 100% of the domestic wastewater.
- » At Zona Franca Celsia, we carried out the energy efficiency improvement project in the generation units, achieving greater generation with less fuel consumption. For more information, please see the Energy Resource Management chapter.

2018 Milestones

- » Zona Franca Celsia received an acknowledgement from the Triple A company (waterline, sewage and waste disposal company of Barranquilla) for its good management of hazardous waste, coming in first place in the Large Waste Generators category.
- » The Advanced Vision Operating Center (NOVA, in Spanish) received the LEED Gold certification for being a sustainable and environmentally-friendly construction.
- » At Guanacaste wind farm, we obtained the Blue Flag Ecological Program award. This prize acknowledges our management of the power plant’s environmental indicators: waste, water, energy, etc.



Our NOVA center received the LEED acknowledgment for being a sustainable construction.

(302-1, 302-3) Internal Energy Consumption

The Company's energy intensity increased 14% from 2017, due to non-renewable energy consumption increasing 23% in Colombia and 7% in Central America. This increase is related to the installed capacity of the thermal power plants, which decreased in 2018 because of the removal of the heat recuperators in the gas turbines of the coal-fired thermal power plant

in Panama. The decision was due to a financial analysis and the decrease in efficiency of the simple-cycle, thermal power plants, which was mainly due to the low dispatches throughout the year. This increase is related to thermal power generation in Colombia and Central America.

Energy Consumption (GJ)	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Non-renewable energy consumption (A)	30,401,104	11,943,313	42,344,417	22,479,639	11,224,544	33,704,183	8,768,946	5,214,254	13,983,200	11,400,036	5,278,223	16,678,260
Electric power generation for own consumption (B)	17,266	37,934	55,200	45,652	17,458	63,110	33,979	6,885	40,864	36,874	6,567	43,441
Purchased energy (C)	100,091	227	100,319	92,353	288	92,641	108,706	1,409	110,115	105,838	1,072	106,910
Total energy sold (D)	12,939,294	5,784,127	18,723,421	20,151,598	5,504,111	25,655,709	18,814,816	3,916,001	22,730,817	19,539,161	3,898,086	23,443,605
Total energy consumption (A+B+C-D)	18,365,524	8,561,488	26,927,012	13,342,927	8,126,164	21,469,091	5,504,648	3,618,388	9,123,036	6,526,256	3,874,407	10,400,664

* (A)+(B)+(C)-(D) Total energy consumption = (A) Non-renewable energy consumption + (B) Electric power generation for own consumption + (C) Purchased energy – (D) Total energy sold.

You can consult the breakdown of our Eco-efficiency indicators in the Appendices section on pp. 179-180.



Reduction of Energy Consumption

Within the management of the energy efficiency programs of our power plants in operation, we highlight the migration of the lighting system to LED technology in Calima, where there was a reduction in energy consumption of 10,881 KWh between 2017 and 2018. We also replaced the engines of the speed regulators, which enabled a reduction in consumption of 5,147 kWh.



Colombia

(302-4) Energy Consumption Reduction Initiatives	Power Plant / Building	Base Year for Calculation of the Reduction	Energy	Reduction Achieved in kWh in 2018
Migration of lighting systems to LED technology	Calima	2017	Electricity	10,881
Replacement of high energy consumption engines in speed regulators of generation units	Calima	2017	Electricity	5,147
Total				16,028

This is how the change of lighting to LED technology shines at Calima hydroelectric power plant, Valle del Cauca.



Zona Franca Celsia thermal power plant, Barranquilla, Colombia.

Water and Discharges

- » At the Zona Franca Celsia thermal power plant, we continued to reuse 100% of domestic wastewater thanks to advanced biological treatment that achieves good quality water for watering gardens and other green areas. In 2018, the estimated total water reused with this system was 2,440 m³.
- » Also at Zona Franca Celsia, 15% of the water taken from the Magdalena River was reused inside the thermal power plant, reducing pressure on the natural resource. With the aim to increase said percentage and keep optimizing the operation of the different unit processes that comprise the non-domestic wastewater treatment system, the Organization implemented the following strategies: installation of turbidity meters in the outflows of the backwashes from the multimedia filters; optimization of the neutralization tank and sludge plants, improving the measurement of control variables and their integration in the control room; and redirection of the wastewater generated from the sludge plant of Flores I to a unit process that enables its reuse.
- » We obtained the discharge permits for the Prudencia hydroelectric power plant in Chiriquí, for which we carried out due diligence on the parameters for measurement upstream and downstream.
- » At the Dos Mares hydroelectric complex, we started to improve the measurement of ecological flows. We installed sensors at the reservoir level, which are operating, as well as sensors at the opening level in radial gates. Similarly, we started the system to automate the monitoring of flows at different levels through the SCADA system, which has enabled the submission of monthly reports on ecological flows to the Ministry of the Environment.



(306-1) Total Water Discharge by Quality and Destination

Receiving Source	Volume of Discharge 2018 (m³)	Features of the Treatment System	Discharge Quality 2018		
			BOD Average Result (mg/l)	TSS Average Result (mg/l)	Reduction Achieved in kWh in 2018
Magdalena River	530,730	Neutralization tanks, sludge plants and API oil-water separator	18.1	45.0	10.0
Steam cycle final discharge (Caribbean Sea mangrove)	78,469,488	No treatment	1.85	4.90	9.90
Combined cycle final discharge (Bahía Las Minas mangrove)	22,463,968	No treatment	1.67	5.56	9.90
Oil-water separator, combined cycle (Bahía Las Minas mangrove)	18	Physical separation of oil and water by density	7.18	4.90	9.90
Neutralization tank (Bahía Las Minas mangrove)	236	Acid-base neutralization	0	0	0
Total discharge (m³)	101,464,440				

Notes:

Colombia

- » The discharges are not used by another organization.
- » The permissible limits of TSS, BOD and greases and oils in the discharge to a body of water are regulated by Resolution 631/2015, as follows: BOD = 150 mg/l; TSS = 100 mg/l; and greases and oils = 20 mg/l. However, wastewater is being discharged into the same body of water of intake, as regulation enables the removal of the contaminant load of some variables. Considering this, the legal verification may only be applied to the result of the removal of the contaminant load (P discharge - P river = P discharge “corrected”).

Panama

- » The permitted limits for discharges into the mangrove are: BOD = 35 mg/l; TSS = 35 mg/l; and greases and oils = 20 mg/l.

Solid Waste

- » We reused 100% of the non-hazardous waste that we generated and that was considered to have potential for reuse (waste for internal or external reuse, recycling and compost), achieving the target set for 2018.
- » We reduced the final disposal of non-hazardous waste by 38% from 2017.
- » We managed to replace 98 transformers with identified PCBs (polychlorinated biphenyls) in the transmission and distribution business.
- » Zona Franca Celsia received an acknowledgement from the Triple A company (waterline, sewage and waste disposal company of Barranquilla) for its good



- management of hazardous waste, coming in first place in the Large Waste Generators category. This award promotes the good environmental practices adopted.

 - » We achieved the target and a reduction in the final disposal of transformers of 5.6% from the previous year.
 - » We increased the amount of recycled
- material by 89% in the Colón thermal power generation complex (plastic, paper, ash, oily water and cans), which considerably reduced the amount of waste disposed of each day in the Monte Esperanza landfill.

 - » We decreased the generation of domestic solid waste by 14% in the power plants
- and administrative offices in Central America with the use of reusable containers for food consumption by the Organization’s employees.

 - » At the administrative office in Panama, we managed to reduce the use of office material (paper) with the implementation of digital processes and the reuse of
- these supplies.

 - » In the power plants, we reduced the hazardous waste generated by 71%.
 - » At Guanacaste wind farm, we achieved the use of 100% of the organic waste for compost and the use of this organic fertilizer for the reforestation trees.

(306-2) Waste Management

Total Weight of Waste by Type (tons)	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Total waste generated in the Organization	4,024.3	14,513.3	18,537.6	7,991.6	41,186.8	49,178.4	7,316.1	7,750.6	15,066.8	7,481.2	14,320.2	21,801.4
Total hazardous waste	363.2	12,221.8	12,585.0	459.0	12,210.6	12,669.6	234.09	2,773.8	3,007.9	122.0	14,160.8	14,282.7
Total non-hazardous waste	3,661.1	2,291.5	5,952.6	7,532.7	28,976.2	36,508.8	7,082.1	4,976.9	12,058.9	7,359.3	159.4	7,518.7
Total waste disposed	738.2	2,356.0	3,094.2	659.3	447.9	1,107.2	435.6	326.5	762.1	464.9	236.3	701.2



Why is the shortage of natural resources one of the main challenges for Celsia?



“For the Company, the availability and quality of natural resources is an essential topic as long as the nature of our activity makes us the first link in the production chain. This means that we are direct users of the ecosystem services provided by the environment, with the exception of natural gas, which is processed before it reaches our thermal power plants.

This situation has made us sensitive to the changes in the quality of natural resources and so we adopt international agreements with specific actions, we execute prevention, correction, mitigation and offsetting strategies, and we promote differential social management in our areas of influence.

LUIS ALFONSO NARANJO

Thermal Power Plant Environmental Management Officer, Celsia



Where Are We Heading?

Short Term (0 to 2 years)

- » Keep consolidating actions for efficient use of the water resource as part of the Suizagua III project.
- » Build and operate the cooling district of Serena del Mar in Cartagena.

Medium Term (3 to 5 years)

- » Replace 100% of equipment containing PCBs by 2020.
- » Build and operate wind power plants in Colombia.
- » Ensure the availability of natural resources for future generations, ensuring the sustainability of the businesses and improving competitiveness in terms of reducing costs and socio-environmental impact.

Our stakeholders benefitted:

 Scientific and Academic Community |  Communities |  Government |  Non-governmental Organizations



Conservation of Ecosystems Biodiversity

Key Indicators

2,600,000 trees planted by December 2018 as part of the **ReverdeC** program

90% progress in the development of **conservation programs** for four endangered flora and fauna species

(103-1) Why is it important?

Colombia is the country with the second highest biodiversity in the world. Therefore, the management and conservation of this is a key matter for the management of our business, so we work to achieve a net positive impact on the biodiversity of our operations' areas of influence. We constantly implement the conservation and offsetting measures established in the environmental management plans, emphasizing actions that enable us to know and manage the species of flora, fauna and ecosystems, and to adapt the protection and action plans to anticipate and minimize the impact during the planning, construction and operating phases of our assets and projects.



Andean cock-of-the-rock sighting at the Calima hydroelectric power plant, Valle del Cauca.

Magdalena River turtle
(*Podocnemis lewyana*),
endemic species to Colombia.

(103-2) Our Management

We focus on knowledge, conservation and management of ecosystems and biodiversity in our areas of influence through the implementation, monitoring and follow-up of the actions of the management plans, using prevention, minimization, mitigation and impact management strategies to generate a net positive impact on biodiversity.

We implement activities to restore ecosystems, rescue and transfer flora and fauna in the assets' areas during construction and operation, and in line with our Biodiversity Policy –which can be consulted [here](#)–, we confirm our commitment to drive knowledge, conservation, recovery and enrichment of biodiversity. To achieve this, we form partnerships with public, private and community entities with sustainability criteria.





The Acineta is a small genus of orchid with more than 20 species.

Our Results

- » We are making efforts to protect and restore the existing habitats in our areas of operation. In 2018, in Colombia and Central America (Panama and Costa Rica), we worked on the protection and restoration of 5,135 hectares with the planting of 241,484 trees of native species under different categories of threat.
- » We developed strategic partnerships with local participants, such as Fondo Agua por la Vida y la Sostenibilidad and the National Coffee Growers Federation, to carry out protection and restoration activities in different ecosystems.
- » We carried out activities for sustainable management of the pustulose ark (*Anadara tuberculosa*) in the mangrove ecosystems of the Colombian Pacific in the area of the Major Council of Afro-Colombian Communities of the Anchicayá River.
- » In partnership with Universidad del Pacífico, we kept investigating the rearing of fish from the Anchicayá River in captivity. In 2018, we established the technology package to obtain fry from the South American catfish (*Ramdia quelen*), as well as the aquiculture assessment to determine the potential of this species as promising for fish farming. We also achieved the massive reproduction of *Sábalo* (*Brycon meeki*), especially with mature breeding

males of their natural environment and we started their aquiculture assessment. In terms of the production of live food for the fish larvae, we managed to isolate from the Anchicayá River and achieve mass reproduction of water fleas (*Dafnia pulex*); copepod crustaceans (*Mesocyclops leuckarti*); copepods (*Arctodiaptomus dorsalis*) and the alga (*Scenedesmus sp. cf.*) (goo.gl/XzdMdp).

- » We supported the Asagox community association of the municipality of Prado (Tolima) in the execution of conservation activities on the habitat of the Magdalena River turtle (*Podocnemis lewyana*), an endemic species to Colombia. A field assessment was conducted to identify the sectors of permanence of the turtle in the river and in the reservoir. More than 373 trees of species that are part of the turtle's diet were planted, signs with information to raise awareness on the importance of conservation of the species were installed and environmental education sessions were implemented for 100% of the student community in the reservoir's sector.
- » **VerdeC** exceeded the target of planting 1,000,000 trees per year. In 2018, we planted 1,066,458 new trees of native species for the conservation of seven forest species, five of them with some degree of threat and two of them least concern species, according to the IUCN. With this program, we came in second place in the Sixth Caracol Television Awards for protection of the environment, in the Large Companies category, which acknowledges the initiatives that develop strategies for the conservation and responsible use of rivers and seas in Colombia.

- » We supported Universidad de los Andes in research on two species of poison frog that are endangered according to the IUCN. These species are: *Oophaga lehmanni* (critically endangered) and *Phyllobates terribilis* (endangered). We formed a partnership with Universidad ICESI to encourage biological research on the basin of the Anchicayá River through the sampling of fauna in the area of the Alto Anchicayá power plant.
- » In Colombia, at the Salvajina, Amaime and Calima power plants, we progressed with the creation of local community nurseries for the production of native forest species, which are nationally and internationally endangered and are some of the species planted for the water conservation of the ecosystems.
- » At our Guanacaste wind farm (Costa Rica), in collaboration with the Gente y Fauna NGO, in May 2018, we obtained the final results of the wildlife records made through camera traps, which operated between January and November 2017, recording species including the jaguar (*Panthera onca*),

the great curassow (*Crax rubra*), and the ocelot (*Leopardus pardalis*). Also, with the support of the Geotec firm, we conducted a study on birds and bats with the aim to assess the possible impact on them during the project's operation.

- » Together with Universidad del Tolima, we prepared the study on the migration routes of fish, their laying areas and main centers for fish sales in the middle and low basins of the Samaná Norte River.
- » At the Cucuana hydroelectric power plant in Roncesvalles (Tolima), and as part of the offsetting program of the Environmental Management Plan, with the Gestión Forestal y Asesorías Ambientales S.A.S. firm, we maintained 7,500 wax palm (*Ceroxylon quindiuense*) trees in 51.05 hectares. This species is the national tree of Colombia, it is an endemic species and it is in the vulnerable (VU) category according to the IUCN (2019). It is also the habitat of the yellow-eared parrot (*Ognorhynchus icterotis*), an endemic species of the Colombian Andes, which is also endangered.



At our Guanacaste wind farm, Costa Rica, with the Gente y Fauna NGO, we recorded this species of jaguar (*Panthera onca*).



(304-3) You can consult the breakdown of our Biodiversity indicators in the Appendices section on pp. 182-184.

With Universidad del Pacífico, we keep researching the rearing of fish from the Anchicayá River in captivity.

- » In Panama, at the Prudencia hydro-electric power plant, Dos Mares hydro-electric complex, in the Chiriquí Province, we restored 3.8 hectares of the scrubland ecosystem by planting 1,154 plants of different fruit and wood species.
- » In the departments of Valle del Cauca and Cauca, we carried out protection and restoration activities on the ecosystems in 554.3 hectares, by planting 217,297 trees, protecting 518 springs and 194 water sources. For more information, please see the table of indicator 304-3.
- » In an estimated area of 4,290 hectares, in the area of mangroves of the mouth of the Anchicayá River into the Pacific Ocean, we strengthened the sustainable management of the pustulose ark (*Anadara tuberculosa*). This activity was carried out with the ethnic communities of the Anchicayá River.
- » As part of the measures to reduce the impact on biodiversity in the Environmental Management Plan of the San Andrés hydroelectric power plant project, we rescued and relocated 10,026 epiphytes of different species in 6.34 hectares in the high and middle-Andean orobiome, Antioquia Department.
- » During the construction of Cel-sia Solar Bolívar, we progressed with the planting of 70% of 2,200 trees of species of ecological importance, such as *Swietenia macrophylla* and *Anacardium excelsum* in four hectares of tropical dry forest in the town of Tabacal-Pita, in the municipality of Santa Rosa de Lima (Bolívar).
- » In the construction phase of Plan5Caribe, we carried out the rescue, removal, transfer and relocation of more than 200 animals –including birds, mammals, amphibians and reptiles–, in an area of dry tropical forest.
- » At Guanacaste wind farm (Costa Rica), seeds were extracted from endemic trees to the area with the help of students from Universidad Earth. They were later transplanted and planted in the protection buffer zone of 350 trees with the participation of students from San Jorge School, for species such as *Zanthoxylum riedelianum*, *Pyracantha coccinea* and *Psidium guajava*.



Species Included in the IUCN Red List and Other Conservation Lists

On our facilities and in the areas affected by operations, in both Colombia and Central America, we reported a total of 320 species on the IUCN Red List and on national conservation lists. Out of these, ten species are critically endangered, eight are endangered, 40 are in the vulnerable category, 17 are near threatened and 226 are of least concern. Below, we present the information in the table.

		2018				
(304 -4) IUCN Red List Category of Threat		Critically Endangered	Endangered	Vulnerable	Near Threatened	Least Concern
No. of IUCN Red List species and national conservation list species present in areas affected by operations in Colombia	302	9	8	36	15	215
No. of IUCN Red List species and national conservation list species present in areas affected by operations in Central America	18	1	0	4	2	11
Celsia Total	320	10	8	40	17	226

Facilities Assessed Based on Their Importance for Biodiversity

At Celsia, we have 15 hydroelectric power plants and one wind farm that are inside or close to areas of some importance for conservation. All of them have measures for the conservation and management of biodiversity (environmental management plan, environmental impact study or environmental license) in both Colombia and Central America.

In the Alto Anchicayá and Bajo Anchicayá hydroelectric power plants, which are inside the Farallones National Natural Park of Cali, because they were built before the area was declared a protected area, we

constantly carry out activities together with the park administration, we develop partnerships for conservation, we have rigorous controls for access to our facilities and we ensure that deforestation, illegal mining or other practices by third parties do not occur.



What do you think about the presence of the Alto and Bajo Anchicayá hydroelectric power plants in the area of the Farallones National Natural Park of Cali?



“Celsia and the Farallones National Natural Park of Cali have become partners for the conservation and sustainable use of the natural resources inside this protected area for the benefit of the local communities and of the country.”

JAIME ALBERTO CELIS PERDOMO

Manager of Farallones National Natural Park of Cali, National Parks Division, Ministry of the Environment and Sustainable Development



Economic Growth • Our People • Client Experience • Energy Resource Management • Business Diversification • Contribution to Society • **Conservation of Ecosystems**

(304-1) Facilities Located in Areas of High Biodiversity Value

2018

Facility	Location with Respect to the Protected Area	Total Area of the Power Plant (built and reservoir areas) (ha.)*	Name of Protected Area or Area of High Biodiversity Value (park, forest, etc.)
Colombia			
Alto Anchicayá hydroelectric power plant	Inside	7,010.1	Farallones National Natural Park of Cali
Bajo Anchicayá hydroelectric power plant	Inside	25	Farallones National Natural Park of Cali
Cucuana hydroelectric power plant	Outside	72	Rosales Forest Reserve (town of San Miguel) Cinturón Andino Biosphere Reserve (UNESCO)
Calima hydroelectric power plant	Outside	2,206	Páramo del Duende National Regional Natural Reserve of Law 2/1959
Río Cali 1 small hydroelectric power plant	Outside	13	Río Cali National Protective Forest Reserve
Río Cali 2 small hydroelectric power plant	Outside	3	Río Cali National Protective Forest Reserve
Alto Tuluá small hydroelectric power plant	Outside	41	Cinturón Andino Biosphere Reserve (UNESCO) Las Hermosas National Natural Park
Bajo Tuluá small hydroelectric power plant	Outside	51	Juan María Céspedes Botanical Garden, Tuluá
Rumor small hydroelectric power plant	Outside	4	Juan María Céspedes Botanical Garden, Tuluá
Riofrío 1 small hydroelectric power plant	Outside	11	Páramo del Duende Regional Natural Reserve
Riofrío 2 small hydroelectric power plant	Outside	52	Páramo del Duende Regional Natural Reserve
Río Piedras small hydroelectric power plant	Outside	20	Cuchilla Jardín-Támesis Integrated Management District
Amaime small hydroelectric power plant			Dry and subxerophytic forest of the Amaime River
Nima 1 small hydroelectric power plant	Outside	33	Las Hermosas National Natural Park
Nima 2 small hydroelectric power plant	Outside	27	Las Hermosas National Natural Park
Central America			
Guanacaste wind farm (Costa Rica)	Outside	188	Rincón de la Vieja National Natural Park

2018 Milestones

- » Out of the transmission and distribution facilities, 37.5% have a forest census and biodiversity studies.
- » All of the generation facilities have environmental management plans, environmental licenses or environmental impact studies for biodiversity.

* The information on the total area (ha) of the power plants (built and reservoir areas) was updated in 2018 with respect to that reported in 2017.



(103-3) **How Do We Evaluate Ourselves?**

The actions to prevent, reduce, mitigate and offset the impact caused by our projects’ planning, construction and operating activities are assessed internally and externally.

They are assessed internally by the socio-environmental professionals, who monitor the implementation of the measures contained in the environmental management plans and in the environmental compliance reports, for the construction stages as well as the operating stages.

In the projects under construction and in operation, the verification guides are the environmental management plan and the monitoring and follow-up plan.

For projects in the environmental assessment stage, biodiversity is studied through the preparation of an environmental impact assessment, which generates a biotic baseline and also analyzes, assesses and hierarchizes the environmental impacts of the project on the ecosystems and biodiversity. This proposes a hierarchy of the mitigation of the impact on biodiversity, establishing the prevention, reduction and mitigation actions, and in the last instance, offsetting actions for impacts.

Externally, the monitoring and verification is carried out by the relevant environmental authority, whether it is regional (regional autonomous corporations) or national (National Environmental Licenses Authority and the Ministry of the Environment and Sustainable Development). For this, Celsia prepares the respective environmental compliance reports each semester or year.



Where Are We Heading?

Short Term (0 to 2 years)

- » Keep making progress in the execution of the agreements with the ICESI, Los Andes, and Pacífico universities to carry out studies and conservation actions in the area of the Anchicayá River.
- » Continue with the research on rearing in captivity freshwater fish of the Anchicayá River –South American catfish (*Ramdia quelen*)– and the mass reproduction of *Sábalo* (*Brycon meeki*).
- » Continue to execute the conservation programs of four endangered species of flora and fauna (wax

palm, Lehmann frog, golden poison frog and Magdalena River turtle) and 50% of the vegetation corridors for the transmission and distribution circuits, to achieve 100% of the classified tree inventory in 2020.

Medium Term (3 to 5 years)

- » Achieve the goal of 10 million trees planted through the **ReverdeC** program.
- » Implement a biological information system that contains the data on ecosystems and biodiversity related to all our assets in Colombia and Central

America and a geographical information system for the mapping and monitoring of the high value species for biodiversity in the area of influence of our assets.

- » Carry out *in vitro* propagation of flora species with high conservation value.

Long Term (6 or more years)

- » Coordinate with the different actors, the protection and conservation plan of the Belmira Paramo in the area of influence of the San Andrés hydroelectric power plant project.



07

Appendices



List of Indicators

Our People

	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
(102 -8) Information on Employees and Other Workers	2015			2016			2017			2018		
Total number of employees	1130	299	1429	1271	286	1557	1327	259	1586	1403	244	1647
Number of employees with a permanent contract	1126	294	1420	1248	284	1532	1312	258	1570	1361	242	1603
Number of employees with a temporary contract	4	4	8	23	2	25	15	1	16	42	2	44
Number of employees with another type of contract	0	1	1	0	0	0	0	0	0	54	0	54
Percentage of employees with a temporary contract	0%	1.34%	0.56%	1.81%	0.70%	1.61%	1.13%	0.39%	1.01%	2.99%	0.82%	2.67%
Percentage of employees with a permanent contract	100%	98%	99%	98%	99%	98%	99%	100%	99%	97%	99%	97%
Total number of male employees	835	236	1071	939	226	1165	980	197	1177	1029	182	1211
Total number of female employees	295	63	358	332	60	392	347	62	409	374	62	436
Percentage of male employees	73.89%	79.00%	74.95%	73.88%	79.02%	74.82%	73.85%	76.06%	74.21%	73.34%	74.59%	73.53%
Percentage of female employees	26.11%	21.00%	25.05%	26.12%	20.98%	25.18%	26.15%	23.94%	25.79%	26.66%	25.41%	26.47%
Employees in the Organization by Employee Category												
Number – Level 1: Executive	9	1	10	9	0	9	9	1	10	8	1	9
Number – Level 2: Management	27	6	33	19	8	27	19	5	24	36	10	46
Number – Level 3: Director	18	10	28	28	8	36	30	7	37	58	7	65
Number – Level 4: Specialist	463	129	592	590	140	730	630	133	763	764	144	908
Number – Level 5: Other levels	613	153	766	625	130	755	639	113	752	537	82	619
Percentage – Level 1: Executive	0.80%	0.33%	0.70%	0.71%	0.00%	0.58%	0.68%	0.39%	0.63%	0.57%	0.41%	0.55%
Percentage – Level 2: Management	2.39%	2.01%	2.31%	1.49%	2.80%	1.73%	1.43%	1.93%	1.51%	2.57%	4.10%	2.79%
Percentage – Level 3: Director	1.59%	3.34%	1.96%	2.20%	2.80%	2.31%	2.26%	2.70%	2.33%	4.13%	2.87%	3.95%
Percentage – Level 4: Specialist	40.97%	43.14%	41.43%	46.42%	48.95%	46.89%	47.48%	51.35%	48.11%	54.45%	59.02%	55.13%
Percentage – Level 5: Other levels	54.25%	51.17%	53.60%	49.17%	45.45%	48.49%	48.15%	43.63%	47.41%	38.28%	33.61%	37.58%



List of Indicators • Memorandum of External Verification • GRI Content Index • Integrated Report Self-Assessment • Financial Statements

(102 -8) Information on Employees and Other Workers	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
	Employees in the Organization by Age											
Number - Group 1: Under 30 years	114	52	166	166	48	214	154	52	206	213	32	245
Number – Group 2: From 30 to 40 years	243	111	354	316	107	423	349	95	444	397	94	491
Number – Group 3: From 40 to 50 years	387	70	457	399	77	476	407	65	472	413	70	483
Number – Group 4: From 50 to 60 years	347	40	387	337	40	377	351	35	386	339	33	372
Number – Group 5: Over 60 years	39	26	65	53	14	67	66	12	78	41	15	56
Percentage – Group 1: Under 30 years	10.09%	17.39%	11.62%	13.06%	16.78%	13.74%	11.61%	20.08%	12.99%	15.18%	13.11%	14.88%
Percentage – Group 2: From 30 to 40 years	21.50%	37.12%	24.77%	24.86%	37.41%	27.17%	26.30%	36.68%	27.99%	28.30%	38.52%	29.81%
Percentage – Group 3: From 40 to 50 years	34.25%	23.41%	31.98%	31.39%	26.92%	30.57%	30.67%	25.10%	29.76%	29.44%	28.69%	29.33%
Percentage – Group 4: From 50 to 60 years	30.71%	13.38%	27.08%	26.51%	13.99%	24.21%	26.45%	13.51%	24.34%	24.16%	13.52%	22.59%
Percentage – Group 5: Over 60 years	3.45%	8.70%	4.55%	4.17%	4.90%	4.30%	4.97%	4.63%	4.92%	2.92%	6.15%	3.40%

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List of Indicators • Memorandum of External Verification • GRI Content Index • Integrated Report Self-Assessment • Financial Statements

List of Female Employees	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
By Employee Category	2015			2016			2017			2018		
Number – Level 1: Executive	1	0	1	1	0	1	1	0	1	1	0	1
Number – Level 2: Management	11	2	13	7	4	11	6	4	10	10	4	14
Number – Level 3: Director	9	3	12	11	1	12	11	0	11	11	1	12
Number – Level 4: Specialist	151	39	190	182	42	224	200	44	244	232	46	278
Number – Level 5: Other levels	123	19	142	131	13	144	129	14	143	120	11	131
Percentage – Level 1: Executive	0.09%	0.00%	0.07%	0.08%	0.00%	0.06%	0.08%	0.00%	0.06%	0.07%	0.00%	0.06%
Percentage – Level 2: Management	0.97%	0.67%	0.91%	0.55%	1.40%	0.71%	0.45%	1.54%	0.63%	0.71%	1.64%	0.85%
Percentage – Level 3: Director	0.80%	1.00%	0.84%	0.87%	0.35%	0.77%	0.83%	0.00%	0.69%	0.78%	0.41%	0.73%
Percentage – Level 4: Specialist	13.36%	13.04%	13.30%	14.32%	14.69%	14.39%	15.07%	16.99%	15.38%	16.54%	18.85%	16.88%
Percentage – Level 5: Other levels	10.88%	6.35%	9.94%	10.31%	4.55%	9.25%	9.72%	5.41%	9.02%	8.55%	4.51%	7.95%
By Age												
Number – Group 1: Under 30 years	42	11	53	59	14	73	57	15	72	79	10	89
Number – Group 2: From 30 to 40 years	72	27	99	97	26	123	106	28	134	117	30	147
Number – Group 3: From 40 to 50 years	113	16	129	115	12	127	120	13	133	122	15	137
Number – Group 4: From 50 to 60 years	67	8	75	60	7	67	63	6	69	56	7	63
Number – Group 5: Over 60 years	1	1	2	1	1	2	1	0	1	0	0	0
Percentage – Group 1: Under 30 years	3.72%	3.68%	3.71%	4.64%	4.90%	4.69%	4.30%	5.79%	4.54%	5.63%	4.10%	5.40%
Percentage – Group 2: From 30 to 40 years	6.37%	9.03%	6.93%	7.63%	9.09%	7.90%	7.99%	10.81%	8.45%	8.34%	12.30%	8.93%
Percentage – Group 3: From 40 to 50 years	10.00%	5.35%	9.03%	9.05%	4.20%	8.16%	9.04%	5.02%	8.39%	8.70%	6.15%	8.32%
Percentage – Group 4: From 50 to 60 years	5.93%	2.68%	5.25%	4.72%	2.45%	4.30%	4.75%	2.32%	4.35%	3.99%	2.87%	3.83%
Percentage – Group 5: Over 60 years	0.09%	0.33%	0.14%	0.08%	0.35%	0.13%	0.08%	0.00%	0.06%	0.00%	0.00%	0.00%



List of Female Employees	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	
By Employment Contract	2015			2016			2017			2018			
Total number of female employees with a permanent contract	291	61	352	322	60	382	343	62	405	360	62	422	
Total number of female employees with a temporary contract	4	2	6	10	0	10	4	0	4	14	0	14	
Total number of female employees with another type of contract	0	0	0	0	0	0	0	0	0	29	0	29	
Number of female employees in management positions (Level 1 + Level 2 + Level 3)	21	5	26	19	5	24	18	4	22	22	5	27	
Number of female employees in junior management positions (Level 3)	9	3	12	11	1	12	11	0	11	11	1	12	
Number of female employees in upper management positions (Level 1 + Level 2 / maximum 2 levels of the CEO)	12	2	14	8	4	12	7	4	11	11	4	15	
Number of female employees in management positions associated with the generation of revenue (generation, T&D, sales and sales team)	No information						6	0	6	5	0	5	
Percentage of female employees in management positions	39%	29%	37%	34%	31%	33%	31%	31%	31%	22%	28%	23%	
Percentage of female employees in junior management positions	50%	30%	43%	39%	13%	33%	37%	0%	30%	19%	14%	18%	
Percentage of female employees in upper management positions (maximum 2 levels of the CEO)	33%	29%	33%	29%	50%	33%	25%	67%	32%	25%	36%	27%	
Percentage of female employees in management positions associated with the generation of revenue (generation, T&D, sales and sales team)	No information						20%	10%	0%	8%	5%	0%	4%



(401-1) New Employee Hires

	Colombia	Central Amer- ica	Colombia	Central America	Celsia Total	Colombia	Central Amer- ica	Celsia Total	Colombia	Central America	Celsia Total
Rate of New Employee Hires by Age and Gender	2015		2016			2016			2018		
Under 30 years	55.70%	29.23%	37.56%	31.43%	36.67%	32.74%	46.15%	36.18%	49.16%	54.55%	49.47%
From 30 to 40 years	31.65%	38.46%	49.27%	28.57%	46.25%	43.36%	28.21%	39.47%	39.11%	18.18%	37.89%
From 40 to 50 years	10.13%	24.62%	12.20%	31.43%	15.00%	20.35%	15.38%	19.08%	8.94%	27.27%	10.00%
From 50 to 60 years	2.53%	4.62%	0.98%	5.71%	1.67%	3.54%	2.56%	3.29%	2.79%	0.00%	2.63%
Over 60 years	0.00%	3.08%	0.00%	2.86%	0.42%	0.00%	7.69%	1.97%	0.00%	0.00%	0.00%
Female	41.77%	20.00%	32.20%	31.43%	32.08%	33.63%	28.21%	32.24%	40.78%	54.55%	41.58%
Male	58.23%	80.00%	67.80%	68.57%	67.92%	66.37%	71.79%	67.76%	59.22%	45.45%	58.42%
Total number of hires	79	65	205	35	240	113	39	152	179	11	190
Hiring rate	6.99%	21.74%	16.13%	12.24%	15.41%	8.52%	15.06%	9.58%	12.76%	4.51%	11.54%

(401-1) Employee Turnover

		2015			2016			2017			2018		
Resignations/Dismissals		Resignations/ Dismissals	Total Employees		Resignations/ Dismissals	Total Employees		Resignations/ Dismissals	Total Employees		Resignations/ Dismissals	Total Employees	
Colombia Total	Total	66	1130	1429	64	1271	1557	62	1327	1586	75	1403	1647
	Voluntary	7			55			27			71		
Central America Total	Total	42	299		45	286		73	259		26	244	
	Voluntary	27			14			36			20		



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Resignations/ Dismissals	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Under 30 years	6	12	18	4	4	8	16	9	25	8	3	11
From 30 to 40 years	4	12	16	13	15	28	18	31	49	15	6	21
From 40 to 50 years	11	13	24	12	9	21	12	18	30	5	8	13
From 50 to 60 years	20	5	25	24	1	25	8	10	18	18	2	20
Over 60 years	25	0	25	11	16	27	8	5	13	29	7	36
Female	25	12	37	26	12	38	26	11	37	23	6	29
Male	41	30	71	38	33	71	36	62	98	52	20	72

Employee Turnover	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Total turnover rate	5.84%	14.05%	7.56%	5.04%	15.73%	7.00%	4.67%	28.19%	8.51%	5.35%	10.66%	6.13%
Staff turnover rate due to voluntary resignation	0.62%	9.03%	2.38%	4.33%	4.90%	4.43%	2.03%	13.90%	3.97%	5.06%	8.20%	5.53%
Number of employees who left by mutual agreement	11	5	16	3	6	9	9	16	25	13	6	19
Number of employees who passed away	3	0	3	0	0	0	0	0	0	1	0	1
Number of employees who left due to retirement or contract ending	31	2	33	0	19	19	11	5	16	26	7	33
Number of employees transferred between companies	9	0	9	3	3	6	11	13	24	0	1	1
Number of employees who resigned voluntarily	7	27	34	55	14	69	27	36	63	32	12	44
Number of employees dismissed	5	2	7	3	3	6	4	3	7	3	0	3
Percentage of employees who left by mutual agreement	16.67%	11.90%	14.81%	4.69%	13.33%	8.26%	14.52%	21.92%	18.52%	17.33%	23.08%	18.81%
Percentage of voluntary resignations / total resignations	10.61%	64.29%	31.48%	85.94%	31.11%	63.30%	43.55%	49.32%	46.67%	94.67%	76.92%	90.10%

Rate of Staff Turnover by Age and Gender	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Under 30 years	0.53%	4.01%	1.59%	0.31%	1.40%	0.51%	1.21%	3.47%	1.58%	0.57%	1.23%	0.67%
From 30 to 40 years	0.35%	4.01%	1.42%	1.02%	5.24%	1.80%	1.36%	11.97%	3.09%	1.07%	2.46%	1.28%
From 40 to 50 years	0.97%	4.35%	2.12%	0.94%	3.15%	1.35%	0.90%	6.95%	1.89%	0.36%	3.28%	0.79%
From 50 to 60 years	1.77%	1.67%	2.21%	1.89%	0.35%	1.61%	0.60%	3.86%	1.13%	1.28%	0.82%	1.21%
Over 60 years	2.21%	0.00%	2.21%	0.87%	5.59%	1.73%	0.60%	1.93%	0.82%	2.07%	2.87%	2.19%
Female	2.21%	4.01%	3.27%	2.05%	4.20%	2.44%	1.96%	4.25%	2.33%	1.64%	2.46%	1.76%
Male	3.63%	10.03%	6.28%	2.99%	11.54%	4.56%	2.71%	23.94%	6.18%	3.71%	8.20%	4.37%



	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Vacancies, Promotions and Seniority	2016			2017			2018		
Vacancies (open selection processes)	276	33	309	195	50	245	282	28	310
Number of vacancies filled with internal personnel	45	16	61	41	13	54	22	8	30
Percentage of vacancies filled with internal personnel	16.30%	48.50%	19.70%	21.00%	26.00%	22.00%	7.80%	28.60%	9.70%
Global number of in-house staff promoted in the last year	45	16	61	41	13	54	49	13	62
Global percentage of in-house staff promoted in the last year	3.50%	5.60%	3.90%	3.10%	5.00%	3.40%	3.50%	5.30%	3.80%
Number of female in-house staff promoted in the last year	6	6	12	9	3	12	13	2	15
Percentage of female in-house staff promoted in the last year	1.80%	10.00%	3.10%	2.60%	4.80%	2.90%	3.50%	3.20%	3.40%
Number of male in-house staff promoted in the last year	39	10	49	32	10	42	36	11	47
Percentage of male in-house staff promoted in the last year	4.20%	4.40%	4.20%	3.30%	5.10%	3.60%	3.50%	6.00%	3.90%
Average seniority of employees in the Company (years)	10.66	6	16.66	10.82	6.04	16.86	10	7.13	17.13
Average seniority of female employees in the Company (years)	8.22	6	14.22	8.37	5.61	13.98	7	6.47	13.47
Average seniority of male employees in the Company (years)	11.53	6	17.53	11.69	6.17	17.86	11	7.35	18.35



List of Indicators • Memorandum of External Verification • GRI Content Index • Integrated Report Self-Assessment • Financial Statements

(404 -1) Average Hours of Training per Year per Employee by Gender and Employee Category	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2015			2016			2017			2018		
Under 30 years	152	2	154	162	0	162	350	0	350	202	5	207
From 30 to 40 years	1,952	179	2,131	887	532	1,419	1,278	418	1,696	773	863	1,636
From 40 to 50 years	710	183	893	1,675	353	2,028	2,601	374	2,975	1,895	479	2,374
From 50 to 60 years	41,101	2,433	43,534	27,120	4,092	32,022	41,827	7,776	49,593	25,297	6,348	31,645
Over 60 years	22,209	1,554	23,763	14,958	2,969	17,927	25,537	4,912	29,729	17,070	2,992	20,062
Female	16.83	2	15	18	0	18	38.89	0	35	25.25	5	23
Under 30 years	72.3	29.83	65	47	67	53	67.26	83.6	70.67	21.47	86.32	35.57
From 30 to 40 years	39.46	18.3	32	60	44	56	86.7	53.43	80.41	32.67	68.47	36.53
From 40 to 50 years	88.77	18.86	74	46	35	44	66.39	58.39	65	33.11	44.08	34.85
From 50 to 60 years	36.23	10.16	31	24	23	24	39.96	37.1	39.53	31.78	36.49	32.41
Over 60 years	18,354	830	19,184	16,430	2,229	18,659	18,116	3,136	21,252	9,783	3,213	12,996
Female	47,771	3,521	51,292	28,373	6,527	34,900	53,477	9,614	63,091	35,681	7,475	43,156
Under 30 years	62.22	13.17	18	49	37	48	52	51	52	26.15	52	30
From 30 to 40 years	57.21	14.92	47.8	30	29	30	54.57	48.8	53.6	34.67	41.06	35.64
From 40 to 50 years	66,124	5,351	70,475	44,803	8,756	53,559	71,593	12,750	84,343	45,464	10,687	56,151
From 50 to 60 years	58	15	49	35	31	34	54	49	53	32.4	43.8	34
Over 60 years	No information			1,271	286	1,557	1,327	259	1,586	1,302	244	1,546
Male				100%	100%	100%	100%	100%	100%	93%	100%	94%

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List of Indicators

• Memorandum of External Verification

• GRI Content Index

• Integrated Report Self-Assessment

• Financial Statements



(403 -2) Injuries, Professional Illnesses, Days Lost, Absences and Number of Fatalities	Unit	Colombia		Central America		Colombia		Central America		Celsia Total		Colombia		Central America		Celsia Total		Colombia		Central America		Celsia Total	
		2015				2016				2017				2018									
CONTRACTORS		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Total accidents	Number	142	3	No information		155	0	4	1	159	1	128	1	11	0	139	1	186	6	2	0	188	6
Days of absence due to accidents	Days	7,233	9			1,948	0	12,016	7	13,964	7	6,816	3	85	0	6,901	3	7,336	25	13	0	7,349	25
Cases of sick leave due to common illness	Cases	1,252	89			973	164	33	17	1,006	181	835	100	0	0	835	100	966	131	No information		966	131
Days of sick leave due to common illness	Days	6,015	593			4,576	605	102	70	4,678	675	5,053	552	0	0	5,053	552	5,369	506			5,369	506
Total hours worked	Hours	2,467,747	195,255			3,060,693	233,394	620,358	58,135	3,681,050	291,529	3,440,965	233,268	733,425	92,137	4,174,390	325,405	7,028,132	736,819	695,217	61,110	7,723,349	797,929
Total days worked	Days	307,011	24,289			360,081	27,458	72,983	6,839	433,065	34,298	404,819	27,443	86,285	10,840	491,105	38,283	826,839	86,685	81,790	7,189	908,629	93,874
Fatalities	Number	1		0	0	0	0	2	0	2	0	1	0	0	0	1	0	1	0	0	0	1	0



(404 -2) Programs for Upgrading Employee Skills and Transition Assistance
Programs to Facilitate Continued Employability and the Management of
Career Endings

Colombia

2018

Indicate the type and scope of the programs that have been carried out to
improve employee skills.

Mentoring: In 2018, Grupo Argos and its subsidiaries, together with the Lee Hecht Harrison firm, developed a mentoring program to empower employees’ strengths. It is a three-stage process, which permits appropriation of the mentoring model with its respective monitoring, achieving the best use of the program.

At Celsia, we have six mentees and eight mentors

Toma la Batuta (Take the Baton): This program aims to train, align, integrate and strengthen Celsia's leaders in order to improve their performance and have a big impact on their work teams.

Thirty-four leaders of Celsia Central America were certified on August 2 in the Take the Baton leadership program. This group of employees comprised the first cohort in this region.

Describe the support programs aimed at facilitating the employability of the
employees and the management of career endings, whether due to retirement or
termination of the work contract.

In 2018, the Company trained 25 people to meet the requirements in 2019 and 2020, in areas such as: career project, physical and mental health, financial health, social health and family and emotional health for a total of 80 hours.

(404 -2) Programs for Upgrading Employee Skills and Transition Assistance
Programs to Facilitate Continued Employability and the Management of
Career Endings

Central America

2018

Indicate the type and scope of the programs that have been carried out to
improve employee skills.

Consolidating a Quality and Continuous Improvement Model in a High-Performance Team: Designed for staff of the Sales and New Business departments with the aim to develop multi-functional skills to cooperate in the achievement of the common goals for which they are responsible and for which they have the resources and autonomy, based on the development of systemic thinking, which are a basis for the marketing and sales strategies to provide quality services. A total of 19 people received this training.

Kaizen and 5S Methodology workshop: Received by professional staff and some middle-level managers. Based on the individual and group quality management methodology and based on the Japanese philosophy of Kaizen, which establishes that no day must go by without a certain improvement and the 5S methodology, improving the work conditions, reducing times and accidents, and increasing production quality and work safety. A total of 48 people participated in this workshop.

Toma la Batuta (Take the Baton): This program aims to train, align, integrate and strengthen Celsia's leaders in order to improve their performance and have a big impact on their work teams. Thirty-four leaders of Celsia Central America were certified on August 2 in the Take the Baton leadership program. This group of employees comprised the first cohort in this region.



	Colombia	Central America	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Issue	2015		2016			2017			2018		
EMPLOYEES											
"Lost time injury frequency rate (accidents / million hours)"	7.78	12.09	9.15	10.21	9.31	6.65	6.39	6.61	6.68	5.18	6.50
"Severity index of (days lost / million hours)"	65.83	0.00	72.04	219.48	93.84	30.21	11.19	27.40	32.18	18.99	30.53
	Colombia	Central America	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Issue	2015		2016			2017			2018		
CONTRACTORS											
"Lost time injury frequency rate (accidents / million hours)"	54.45	No information	47.05	7.37	40.28	35.11	13.32	31.11	24.73	2.64	22.77
"Severity index of (days lost / million hours)"	2,719	No information	591.36	17,720	3,517	1855.90	103	1534	947.98	17.19	865.36

	(EU18) Employees who Have Undertaken Relevant Occupational Health and Safety Training									(EU18) Contractors who Have Undertaken Relevant Occupational Health and Safety Training								
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
	2016			2017			2018			2016			2017			2018		
Number of employees	1,271	286	1,557	1,329	173	1,502	1,785	384	2,169	3626	313	3,939	7,649	1,949	9,598	11,052	2,063	13,115
Number of employees trained in occupational health and safety	1,271	286	1,557	1,329	173	1,502	1,785	384	2,169	3,626	313	3,939	7,649	1,949	9,598	11,052	2063	13,115
Percentage of employees trained in occupational health and safety	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of training hours on OHS	No information			8,253	8,946	17,199	3,122	1,840	4,962	No information			49,938	3,475	53,413	24,366	3,916	28,282



List of Indicators

Contribution to Society

(103 -2) Number of Socio-Environmental Grievances in Operating Power Plants ¹	2015			2016			2017			2018		
	Colombia	Central America	Celsia Total	Colom-bia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Number of grievances submitted through formal mechanisms	7	0	7	16	0	16	7	4	11	8	0	8
Number of grievances resolved	7	0	7	14	0	14*	6	4	10*	8	0	8

Number of Socio-Environmental Grievances in Projects under Construction²

Number of grievances submitted through formal grievance mechanisms	0	0	0	0	0	0	0	0	0	49	0	49
Number of grievances resolved	0	0	0	0	0	0	0	0	0	49	0	49

1 This year, the complaints received in the operation of the transmission and distribution business are included in the report of operating power plants, which consist of three complaints. The rest of the power plants that had been reported in previous years had a 29% reduction in the number of complaints submitted. Additionally, we highlight that 100% of the complaints received were resolved and closed.

2 We highlight that during 2017, no complaints were submitted about the projects, but in 2018, there were, due to the development of construction activities of transmission and generation projects. Some of them, being close to populations, are related to the effect on private infrastructure (housing), access to homes, and generation of noise and dust. These were resolved in a timely manner by the socio-environmental team of each project.

* The open complaints at the end of 2016 and 2017 were resolved and managed in the following years.



(203-1) Investments in Infrastructure and Services Supported

2018
General

	Project Sta- tus	Investment (COP)		Current or Forecast Impact on the Communities and Local Economies	People Affected
		Mandatory	Voluntary		
Sports, culture and recreation: Development of activities, improvement of sports facilities and parks	Finalized	115,537,731	50,455,618	Improvement of quality of life, healthy habits, and use of free time	3,080
Health: Equipment of healthcare centers, health sessions, and pet sterilization	Finalized	112,019,400	102,123,760	Improved quality of life	9,520
Road infrastructure: Design, construction or improvement of bridges, roads and paths	Finalized	350,518,900	3,510,038,949	Improvement of the mobility and connectivity conditions of the communities, safe transit, reduction of journey times and better conditions for the transportation of agricultural products for sale	7,207
	Under development	243,117,515	22,260,000		1,240
Basic sanitation: Waterlines, wastewater management and solid waste management	Finalized	123,538,875	25,683,810	Improvement of the basic sanitation infrastructure, which results in the communities' health and the conservation of natural resources	1,095
	Under development	0	8,750,000		250
Community infrastructure: Design, construction or improvement of productive collection centers, community centers, indigenous councils (cabildos), administrative centers of community councils of Afro-Colombian communities, and incorporation of rural areas into the electric grid	Finalized	128,000,000	722,556,578	Community development, improvement of the production processes, adaption of infrastructure to strengthen cultural practices and community integration	1,195
	Under development	177,000,000	70,362,921		290
Educational infrastructure: Improvement or construction of schools, school cafeterias and bathrooms	Finalized	0	3,578,358,339	Improvement of the physical conditions so that they are safer, healthier and with comfortable and decorated areas, which contribute to the quality of education and students remaining in education	6,386
	Under development	0	916,125,760		1,035

Colombia

2018
General

	Project Status	Investment (COP)		Current or Forecast Impact on the Communities and Local Economies	People Affected
		Mandatory	Voluntary		
Basic sanitation: Community waterlines and healthcare centers	Finalized	0.00	6,046.91	Improvement of the populations' health through a better service	18,070
Educational infrastructure: Improvement and adaptation of classrooms, electricity system and awarding of scholarships	Finalized	6,297	13,360	Good lighting improves the learning environment and prevents school abandonment	613
Educational infrastructure: Improvement or construction of schools, school cafeterias and bathrooms	Finalized	0	5,300	Recreation for the community	4,400

Central America



(203-2) Indirect Economic Impacts (Positive and Negative)

Description of Impact	Place of Occurrence
Greater electricity backup, efficiency and safety	Colombia
Reduction of the unemployment rate through the generation of formal employment	
Greater availability of and access to transportation, improving the mobility of people and agricultural products in the regions	
Income generation by production project	
Increase in the cost of living in the municipalities of the areas where energy projects are being built (generation and distribution)	
Promotion of the local economy	Central America
Opportunity of access to healthcare services	

(413-2) Operations with Significant (Actual and Potential) Negative Impacts on Local Communities

Colombia		
2018 Operating Centers	Type of Impact (Actual or Potential)	Description of Impact
Zona Franca	Potential	Noise emissions
Prado	Actual	Temporary alteration of the mobility conditions for some communities located at the tail-end of the reservoir
Salvajina	Actual	Temporary alteration of the mobility conditions for some communities located at the tail-end of the reservoir
Central America		
Bahía Las Minas	Potential	Impact on the air quality from emissions outside regulation in the case of failure of equipment
Gualaca hydroelectric power plant	Potential	Increase in the water temperature from the discharge of the power plant's cooling system
Lorena hydroelectric power plant		
Prudencia hydroelectric power plant		

(413-1) Operations with Local Community Engagement, Impact Assessments, and Development Programs

[illegible]



(LGB-02) London Benchmarking Group LBG – Social Investment

Social Invest-ment of the Orga-nization by Line of Action	2016						2017						2018					
	Colombia		Central America		Celsia Total		Colombia		Central America		Celsia Total		Colombia		Central America		Celsia Total	
	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD
Access to energy	2,932,659,683	977,322	420,099	140	2,933,079,782	977,462	1,049,182,451	340,202	21,806,070	7,071	1,070,988,521	347,273	502,567,380	169,991	50,601,699	17,115.81	553,169,079	187,107
Quality of life	8,128,975,216	2,709,017	427,622,180	142,507	8,556,597,396	2,851,524	13,212,786,076	4,284,302	385,000,145	124,838	13,597,786,221	4,409,140	12,747,357,742	4,311,740	418,964,249	141,713	13,166,321,990	4,453,453
Communi-ty devel-opment	7,005,503,481	2,334,615	0	0	7,005,503,481	2,334,615	6,343,679,607	2,056,965	2,300,664	746	6,345,980,271	2,057,711	3,751,610,118	1,268,966	2,392,757	809.34	3,754,002,875	1,269,776
Promotion of education	5,023,736,560	1,674,183	867,832,338	289,209	5,891,568,898	1,963,392	8,296,456,433	2,690,161	343,144,498	111,266	8,639,600,931	2,801,427	8,696,330,224	2,941,497	136,473,049	46,161.43	8,832,803,273	2,987,658
Admin-istrative expenses	1,041,663,084	347,139	0	0	1,041,663,084	347,139	1,723,942,106	558,995	0	0	1,723,942,106	558,995	1,580,498,309	534,597	0	0	1,580,498,309	534,597
Total	208,152	215,492	327,473	337,574	222,887	287,446	30,626,046,673	9,930,625	752,251,377	243,921	31,378,298,050	10,174,545	27,278,363,773	9,226,791	608,431,754	205,799.46	27,886,795,527	9,432,590

How the Organi-za-tion Made Social Invest-ments	2016						2017						2018					
	Colombia		Central America		Celsia Total		Colombia		Central America		Celsia Total		Colombia		Central America		Celsia Total	
	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD	COP	USD
Money	13,873,365,401	4,623,361	1,280,871,068	426,856	15,154,236,469	5,050,217	20,075,583,033	6,509,592	752,251,377	243,921	20,827,834,410	6,753,513	17,986,175,661	6,083,748	608,431,754	205,799.46	18,594,607,415	6,289,547
In-kind	9,188,552,559	3,062,126	15,003,550	5,000	9,203,556,109	3,067,126	8,794,096,150	2,851,523	0	0	8,794,096,150	2,851,523	7,698,714,390	2,604,057	0	0	7,698,714,390	2,604,057
Time	28,956,980	9,650	0	0	28,956,980	9,650	32,425,384	10,514	0	0	32,425,384	10,514	12,975,413	4,389	0	0	12,975,413	4,389
Admin-istrative expenses	1,041,663,084	347,139	0	0	1,041,663,084	347,139	1,723,942,106	558,995	0	0	1,723,942,106	558,995	1,580,498,309	534,597	0	0	1,580,498,309	534,597
Total	24,132,538,024	8,042,276	1,295,874,618	431,856	25,428,412,642	8,474,132	30,626,046,673	9,930,625	752,251,377	243,921	31,378,298,050	10,174,546	27,278,363,773	9,226,791	608,431,754	205,799.46	27,886,795,527	9,432,590

01
The Energy
You Want

02
Letter from the
Chairman of the Board

03
Management
Report

04
Our
Actions

05
Our
Business

06
Material
Topics

07
Appendices

List of Indicators • Memorandum of External Verification • GRI Content Index • Integrated Report Self-Assessment • Financial Statements



Percentage of the Organization's Investments	2016			2017			2018		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Investments in the community	89%	85%	88%	87%	55%	86%	88%	85%	88%
Donations	3%	0%	3%	2%	0%	2%	4%	0%	4%
Commercial initiatives in the community	8%	15%	8%	11%	45%	12%	8%	15%	9%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Mandatory vs. Voluntary Social Investment	2016				2017				2018			
	Mandatory	Voluntary	Celsia Total		Mandatory	Voluntary	Celsia Total		Mandatory	Voluntary	Celsia Total	
			COP	USD			COP	USD			COP	USD
Colombia (COP)	10,169,349,734	13,963,188,290	24,132,538,024	8,042,276	11,959,447,372	18,666,599,302	30,626,046,674	9,930,625	7,431,865,227	19,846,498,546	27,278,363,773	9,226,791
Central America (USD)	3,900	427,956	1,295,874,618	431,856	4,400	239,521	752,252,364	243,921	5,922.54	199,876.92	608,431,754	205,799.46

(LGB-01) Beneficiaries of Social Investment by Line of Action	2016			2017			2018		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Access to energy	3,160	87	3,247	1,910	523	2,433	75	2,033	2,108
Quality of life	76,997	177	77,174	187,015	4,974	191,989	92,324	57,678	150,002
Community development	36,360	0	36,360	29,959	28	29,987	15,886	28	15,914
Promotion of education	91,635	7,076	98,711	108,589	4,576	113,165	114,602	4,820	119,422
Total	208,152	7,340	215,492	327,473	10,101	337,574	222,887	64,559	287,446

List of Indicators

Eco-efficiency

	2015			2016			2017			2018		
Energy Consumption (GJ)	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Total energy consumption	18,365,524	8,561,488	26,927,012	13,342,927	8,126,164	21,469,091	5,504,648	3,618,388	9,123,036	6,526,256	3,874,407	10,400,664
Non-renewable energy consumption	30,401,104	11,943,313	42,344,417	22,479,639	11,224,544	33,704,183	8,768,946	5,214,254	13,983,200	11,400,036	5,278,223	16,678,260
Diesel fuel (includes diesel, power plants, backup generators and vehicles of the Company)	4,719,627	424,943	5,144,570	7,097,683	314,845	7,412,528	18,564	385,370	403,934	16,128	151,512	167,640
Consumption of gasoline	9,555	236	9,791	14,770	351	15,121	8,234	474	8,708	8,757	2,024.54	10,781
Consumption of bunker fuel	0	2,707,105	2,707,105	0	2,469,785	2,469,785	0	2,588,731	2,588,731	0	607,940	607,940
Consumption of LPG	0.8	0	1	1	0	1	2	0	2	2.83	0	2.83
Natural gas consumption	25,671,922	0	25,671,922	15,367,186	0	15,367,186	8,553,015	0	8,553,015	7,951,565	0	7,951,565
Consumption of liquefied natural gas (LNG)	N/A	N/A	N/A	N/A	N/A	N/A	189,131	0	189,131	3,423,584	0	3,423,584
Consumption of coal	0	8,811,028	8,811,028	0	8,439,564	8,439,564	0	2,239,679	2,239,679	0	4,516,747	4,516,747
Electric power generation for own consumption	17,266	37,934	55,200	45,652	17,458	63,110	33,979	6,885	40,864	36,874	6,567	43,441
Solar power generation (Yumbo building)	297	0	297	276	0	276	216.34	0	216	243.19	0	243
Hydroelectric power generation	16,969	22,608	39,577	45,376	5,720	51,096	33,763	6,025	39,788	36,631	6,221	42,852
Wind power generation	0	15,326	15,326	0	11,738	11,738	0	860	860	0	346	346
Thermal energy generation	351,990	0	351,990	308,126	0	308,126	125,928	141,903	267,831	250,056	164,589	414,645
Purchased energy	100,091	227	100,319	92,353	288	92,641	108,706	1,409	110,115	105,838	1,072	106,910
Consumption of purchased energy (invoicing and purchasing for the power plants, cooling districts, offices, sales offices and substations)	100,091	227	100,319	92,353	288	92,641	108,706	1,409	110,115	105,838	1,072	106,910
Total energy sold	12,939,294	5,784,127	18,723,421	20,151,598	5,504,111	25,655,709	18,814,816	3,916,001	22,730,817	19,539,161	3,898,086	23,443,605
Thermal energy	12,152,938	3,419,986	15,572,924	9,274,718	3,116,126	12,390,844	3,406,983	1,604,160	5,011,143	5,016,492	1,411,455	6,427,947
Hydroelectricity	786,356	1,440,131	2,226,487	10,875,600	1,674,201	12,549,801	15,387,709	1,729,721	17,117,430	14,454,111	1,673,427	16,127,538
Wind power	0	924,010	924,010	0	713,784	713,784	0	582,120	582,120	0	801,720	801,720
Solar energy (roofs and floors)	0	0	0	1,280	0	1,280	20,124	0	20,124	74,916	11,484	86,400



(306-2) Total Weight of Waste by Type and Disposal Method

Waste Management (Tons)	2015			2016			2017			2018		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Total waste generated in the Organization	4,024.30	14,513.30	18,537.60	7,991.60	41,186.80	49,178.40	7,316.10	7,750.60	15,066.80	7,481.20	14,320.20	21,801.40
Total hazardous waste by disposal method	363.2	12,221.80	12,585.00	459	12,210.60	12,669.60	234.09	2,773.80	3,007.90	122	14,160.80	14,282.70
Internal and external reuse	0	0	0	0	0	0	23	0	23	0.7	0	0.7
Recycling	301.6	12,152.80	12,454.30	186.7	12,033.20	12,219.90	101.1	2,641.10	2,742.20	72.48	14,079.20	14,151.70
Incineration	38.7	69	107.8	231	177.5	408.4	49.5	121.2	170.6	22.01	81.6	103.6
Hazardous waste landfill	20.4	0	20.4	17.4	0	17.4	11	0	11	8.82	0	8.8
On-site storage	2.5	0	2.5	23.9	0	23.9	49.5	11.6	61	17.95	0	18
Other treatments	0	0	0	0	0	0	0	0	0	14.8	0	14.8
Total non-hazardous waste by disposal method	3,661.10	2,291.50	5,952.60	7,532.70	28,976.20	36,508.80	7,082.10	4,976.90	12,058.90	7,359.30	159.4	7,518.70
Internal and external reuse	37.8	0	37.8	2,479.40	0	2,479.40	3,968.50	0	3,968.50	12.4	0	12.4
Recycling	1,201.80	4.5	1,206.30	465.2	28,705.70	29,171.00	327.6	4,771.10	5,098.70	508.67	4.4	513
Composting	1,742.40	0	1,742.40	4,177.10	0	4,177.10	2,410.80	0.4	2,411.20	6,404.10	0.4	6,404.50
Sanitary landfill and dump	679.1	2,287.00	2,966.10	410.97	270.4	681.4	375.13	205.4	580.5	434.08	154.7	588.8
Total waste disposed (tons)	738.2	2,356.00	3,094.20	659.3	447.9	1,107.20	435.6	326.5	762.1	464.9	236.3	701.2

Note: The other treatment category for hazardous waste includes the co-processing treatments (bioremediation and deactivation of biological sanitary waste) and physiochemical treatments (new category for 2019).



List of Indicators • Memorandum of External Verification • GRI Content Index • Integrated Report Self-Assessment • Financial Statements

List of Indicators

Supply

308-1)(308-2)(414-1)(414-2) Supplier Social and Environmental Assessment	2017						2018					
	Labor/Social			Environmental			Labor/Social			Environmental		
	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total	Colombia	Central America	Celsia Total
Number of suppliers assessed	61	15	76	279	93	372	139	39	178	335	117	452
Percentage of suppliers assessed	3%	3%	3%	12%	21%	13%	7%	9%	6%	16%	22%	16%
Number of suppliers identified as having possible negative impacts	13	3	16	40	13	53	15	7	22	17	8	25
Number of suppliers identified as having possible negative impacts with which improvement plans were agreed	8	1	9	16	4	20	7	2	9	9	0	9
Percentage of suppliers identified as having possible negative impacts with which improvement plans were agreed	62%	33%	56%	40%	31%	38%	47%	29%	41%	53%	0%	36%
Number of suppliers identified as having possible negative impacts with which the contract was terminated	0	0	0	0	0	0	0	0	0	0	0	0
Percentage of suppliers identified as having possible negative impacts with which the contract was terminated	0%	0%	0	0	0%	0	0%	0%	0	0%	0%	0

List of Indicators

Biodiversity

Protected or Restored Habitats / Colombia 2018

Location (department/ municipality)	Type of Ecosystem	Protec- tion	Restoration	Size of Intervened Area (ha)	Collaboration with Third Parties	Progress of the Action (%)	Description of the Activities Implemented
Valle del Cauca. Calima El Darién	Andean forests that form part of the hotspots: Tropical Andes and Tumbes-Chocó- Magdalena	X	X	37	Fondo Agua por la Vida y la Sostenibilidad Association of Blackberry Farmers (Asocomore)	100	Planting of 13,775 trees with the production of plant material in local nurseries for species with some degree of threat or vulnerability locally, nationally or internationally, such as the black cedar (<i>Juglans neotropica</i>) and the species of conifer (<i>Podocarpus oleifolius</i>). This intervention enabled the conservation of 13 springs.
Valle del Cauca. Calima El Darién	Andean forests that form part of the hotspots: Tropical Andes and Tumbes-Chocó- Magdalena		X	5.7	National Federation of Coffee Growers La Selva Civil Society Natural Reserve	100	Planting of 20,000 trees, bushes and herbaceous plants in a process of ecological restoration of La Selva Civil Society Natural Reserve, town of El Diamante, with the planting of species of ecological importance, such as the black cedar (<i>Juglans neotropica</i>) and the species of conifer (<i>Podocarpus oleifolius</i>).
Valle del Cauca. Bolívar, Roldanillo and Trujillo / Pescador basin	Cold rainforest in fluvial- gravitational mountain and middle very dry shrubland and scrubland in fluvial- gravitational mountain	X	X	82.8	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 24,460 trees in silvopastoral, enrichment, domestic forest and hedge systems, protecting 14 springs and seven water sources, with the planting of species of ecological importance such as the Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Cali / Cali River basin	Middle rainforest in fluvial- gravitational mountain	X	X	14.2	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 4,734 trees in silvopastoral, protective forest and hedge systems to protect seven springs and three water sources. Species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Zarzal, Bugalagrande and Sevilla / Riopaila basin	Fragmented Andean forests	X	X	31	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 9,278 trees in silvopastoral, protective forest, enrichment, domestic forest and hedge systems to protect six springs and seven water sources. Species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Ginebra / Guabas River basin	Fragmented Andean forests	X	X	59.6	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 15,744 trees in silvopastoral, enrichment, domestic forest and hedge systems to protect 26 springs and 13 water sources. Species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Tuluá / Bugalagrande River basin	Andean forest	X	X	23	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 9,011 trees in silvopastoral, protective forest, domestic forest and hedge systems for the protection of 28 springs and 11 water sources. Species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Ginebra, Cerrito and Guacarí / Zabaletas River basin	Fragmented Andean forests	X	X	42.6	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 10,001 trees in silvopastoral, protective forest and hedge systems to protect seven springs and one water source. Species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paulinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Pradera, Palmira and Candelaria / Bolo River basin	Fragmented Andean forests	X	X	75	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 20,412 trees in silvopastoral, protective forest, enrichment, domestic forest and hedge systems to protect 15 springs, 10 water sources and two wetlands. Species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Florida / Guachal - Frayle River basin	Fragmented Andean forests	X	X	55.2	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 18,984 trees in silvopastoral, protective forest, enrichment, domestic forest and hedge systems to protect 96 springs and 30 water sources. Species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .

Location (department/ municipality)	Type of Ecosystem	Protec- tion	Restoration	Size of Intervened Area (ha)	Collaboration with Third Parties	Progress of the Action (%)	Description of the Activities Implemented
Valle del Cauca. Florida / Desbaratado River basin	Fragmented Andean forests	X	X	32	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 8,744 trees in silvopastoral and domestic forest systems to protect 18 springs and nine water sources, with the planting of species ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Tuluá / Tuluá River basin	Andean forest	X	X	12	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 2,400 trees in silvopastoral systems to protect 27 springs, one wetland and four water sources, with the planting of species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Cerrito and Palmira / Nima – Amaime River basin	Andean forest	X	X	11	Fondo Agua por la Vida y la Sostenibilidad	100	Planting of 2,200 trees in ecological restoration to protect two springs and two streams, with the planting of species of ecological importance: Spanish cedar (<i>Cedrela odorata</i>), <i>Eugenia sp. nov. lepredourii</i> , <i>Retrophyllum rospigliosii</i> , <i>Paullinia navicularis</i> , <i>Podocarpus oleifolius</i> and <i>Juglans neotropica</i> .
Valle del Cauca. Buenaventura and Dagua / Anchicayá River basin	Mangrove	X		4,290.00	Major Council of Afro-Colombian Communities of the Anchicayá River	70	Strengthening of the sustainable management of the pustulose ark (<i>Anadara tuberculosa</i>) in the mangroves located in the territory of the Major Council of Afro-Colombian Communities of the Anchicayá River.
Valle del Cauca. Candelaria	Tropical dry forest	X		1	NO	100	Relocation of wildlife with the recording of 138 birds of 28 species and 18 families. The family with the most presence is the Thraupidae. El Carmelo substation 115/34.5/13.2 kV.
Valle del Cauca. Buenaventura	Very tropical rainforest		X	48	Community Council for Afro-Colombian Communities of Bajo Anchicayá	80	Implementation of agroforestry systems and enrichment zones in 48 hectares with 19 species, which includes one in the vulnerable category: <i>Cedrela odorata</i> . Electricity connection in Bajo Anchicayá.
Valle del Cauca. Dagua	Low mountainous rainforest		X	4	NO	80	Planting of 3,840 trees in agroforestry and hedge systems in the township of El Carmen. Includes landscape design in urban areas. In the circuit of El Carmen at 13.2 kV.
Valle del Cauca. Palmira	Tropical dry forest		X	2	NO	80	Planting of 1,027 trees in agroforestry and hedge systems in the township of Palmaseca of the Palmira Municipality. Palmaseca-Crucero and Santa Bárbara-Palmaseca circuit.
Valle del Cauca. Guacarí	Tropical dry forest		X	1	NO	80	Planting of 690 trees in agroforestry and hedge systems in the area of influence of electricity networks in the Guacarí Municipality. Vulnerable species: <i>Cedrela odorata</i> . Guacarí diversion circuit.
Valle del Cauca. Yumbo	Mountainous rainforest		X	3.3	NO	100	Planting of 2,061 seedlings of native species and fruit trees on water recharge land of the Yumbo Municipality. Species of ecological importance: <i>Cedrela odorata</i> , <i>Alnus acuminata</i> and <i>Quercus humboldtii</i> . Celsia Solar Yumbo project.
Cauca. Morales	Colombian Massif Andean forest		X	14	National Federation of Coffee Growers	100	Planting of 50,000 trees, bushes and herbaceous plants in a process of ecological restoration on land of the Agua Negra Indigenous Reservation. Species of ecological importance: Gualanday (<i>Jacaranda caucana</i>), Colombian mahogany (<i>Cariniana pyriformis</i>) and pink cedar (<i>Acrocarpus fraxinifolius</i>).
					Agua Negra Indigenous Reservation		
Tolima. Roncesvalles / Cucuana River basin	Fragmented Andean forests		X	51.1	NO	100	As part of the actions of the Environmental Management Plan of Cucuana hydroelectric power plant (offsetting measure), maintenance was carried out on 7,500 wax palms between March-April and September-October, with the support of the Gestión Forestal y Asesorías Ambientales S.A.S. firm, in 51.05 hectares – six plots of land of three towns in the municipality of Roncesvalles–.
Antioquia. San José de la Montaña and San Andrés de Cuerquia	Secondary vegetation in cloud forest of the high- Andean orobiome		X	1.7	NO	80	Forest enrichment as the implementation of management measures during the construction of the San Andrés hydroelectric power plant project.
Antioquia. San José de la Montaña and San Andrés de Cuerquia	Gallery forest in cloud forest of the middle-Andean orobiome		X	2.5	NO	80	Forest enrichment as the implementation of management measures during the construction of the San Andrés hydroelectric power plant project.

Location (department/ municipality)	Type of Ecosystem	Protec- tion	Restoration	Size of Intervened Area (ha)	Collaboration with Third Parties	Progress of the Action (%)	Description of the Activities Implemented
Antioquia. San José de la Montaña and San Andrés de Cuerquia	Cloud forest of the high- Andean orobiome	X		3.8	NO	100	Forest conservation and passive restoration as the implementation of management measures during the construction of the San Andrés hydroelectric power plant project.
Antioquia. San José de la Montaña and San Andrés de Cuerquia	Secondary vegetation of high-Andean orobiome		X	2.5	NO	100	Restoration of stubble and planting of trees as the implementation of management measures during the construction of the San Andrés hydroelectric power plant project.
Antioquia. San José de la Montaña and San Andrés de Cuerquia	Woodland grasses of the middle-Andean orobiome		X	7	NO	100	Restoration of grasses and planting of trees as the implementation of management measures during the construction of the San Andrés hydroelectric power plant project.
Antioquia. San José de la Montaña and San Andrés de Cuerquia	Woodland grasses of the high-Andean orobiome		X	1.5	NO	100	Restoration of grasses and planting of trees as the implementation of management measures during the construction of the San Andrés hydroelectric power plant project.
Antioquia. San José de la Montaña and San Andrés de Cuerquia	High and middle-Andean orobiome	X	X	6.3	NO	100	Rescue and relocation of 10,026 specimens of epiphytes as the implementation of management measures during the construction of the San Andrés hydroelectric power plant project.
Antioquia. San José de la Montaña and San Andrés de Cuerquia	High-Andean orobiome	X	X	5.14	NO	70	Facilitation plan: Propagation and reintroduction as the implementation of management measures during the construction of the San Andrés hydroelectric power plant project.
Atlántico. Malambo, Soledad and Galapa	Very dry tropical forest	X		22.3	NO	100	Rescue of 66 animals, including birds, amphibians, reptiles and mammals, and the rescue of 22 nests. Two species of bird with some degree of endemism were recorded. The relocation was carried out in the protected area of the Luiriza Integrated Management District. Caracolí 1 substation of 110 kV and related works.
Atlántico. Malambo, Soledad and Galapa	Very dry tropical forest		X	2	NO	80	Ecological rehabilitation in the water sources of the Louriza Reserve with 625 trees of native species. They include vulnerable species such as wild cashew (<i>Anacardium excelsum</i>), the rain tree (K), Spanish cedar (<i>Cedrela odorata</i>) and sandbox tree (<i>Hura crepitans</i>). Caracolí 1 substation of 110 kV and related works.
Atlántico. Malambo, Soledad and Galapa	Very dry tropical forest	X		57.1	NO	100	Rescue and relocation of wildlife. Release in the Luriza Natural Reserve of: 64 amphibians and reptiles, 32 nests and 14 mammals. Caracolí 1 substation of 110 kV and related works.
Atlántico. Malambo, Soledad and Galapa	Tropical dry forest	X		57.1	NO	100	Rescue, transfer and relocation of epiphytes to the protected area of the Luriza Integrated Management District of 30 specimens of Tillandsia flexuosa. Caracolí 1 substation of 110 kV and related works – stretch 2.
Atlántico. Barranquilla and Puerto Colombia	Tropical dry forest	X		9.4	NO	100	Rescue and relocation of wildlife. Release in the Luriza Natural Reserve of: 46 amphibians and reptiles, two nests and three mammals. Norte electrical substation of 110 kV.
Bolívar. Santa Rosa de Lima	Very dry tropical forest	X		44	NO	100	Rescue and relocation of wildlife. Release in the Luriza Natural Reserve of: 52 amphibians and reptiles, 47 nests and 23 mammals. Bolívar (110 kV) and Manzanillo substations and related lines.
Bolívar. Santa Rosa de Lima	Tropical dry forest		X	2	Community Council for Afro-Colombian Communities of Bayunca	80	Planting of 1,600 trees with agroforestry system, including vulnerable species such as <i>Quercus humboldtii</i> and <i>Bombacopsis quinata</i> . Celsia Solar Bolívar.
Bolívar. Santa Rosa de Lima	Tropical dry forest		X	4	NO	70	Planting of 2,200 trees in agroforestry arrangement on the path of the town of Tabacal – Pita. Species of ecological importance: <i>Swietenia macrophylla</i> and <i>Anacardium excelsum</i> . Celsia Solar Bolívar
Córdoba. Montería	Tropical dry forest	X		3	NO	100	Relocation of 64 wild animals, mainly reptiles of the <i>Iguana iguana</i> species and the recording of 23 nests. Nueva Montería substation.
Córdoba. Montería	Tropical dry forest		X	1.5	NO	80	Planting of 923 trees in the Santa Isabel Natural Reserve. Includes endangered species, such as <i>Swietenia macrophylla</i> and <i>Aspidosperma polyneuron</i> . Nueva Montería substation.
La Guajira. Maicao	Very dry tropical forest		X	0.1	NO	90	Planting of 65 trees in urban area of the Maicao Municipality. Maicao substation.



List of Indicators • Memorandum of External Verification • GRI Content Index • Integrated Report Self-Assessment • Financial Statements

Protected or Restored Habitats / Central America 2018

Location (department/ municipality)	Type of Ecosys- tem	Type of Action		Size of Inter- vened Area (ha)	Collaboration with Third Parties	Progress of the Action (%)	Description of the Activities Implemented
		Protection	Restoration				
Guanacaste Province	Pre-mountain rainforest		X	2	Universidad Earth and San Jorge School	100	Extraction of seeds from endemic trees of the area with the help of students from Universidad Earth.
Bagases Canton							Transplant and planting of 350 trees in the forest protection buffer zone of Guanacaste wind farm with the participation of children from San Jorge School. Species: <i>Zanthoxylum riedelianum</i> , <i>Pyracantha coccinea</i> , <i>Psidium guajava</i> , etc. Reforested area: Two hectares of an old dump.
Mogote District							
(Costa Rica)							
El Giral Community, water intake, Colón Province, Colón District, Buena Vista Township	Tropical rainforest	X		0.8	Grupo ITS	100	The reforested area is owned by Celsia and maintenance activities are carried out there every quarter.
Chiriquí Province, David District, Las Lomas Township	Shrubland, cattle farming land		X	3.8	Metalfer	100	Planting of 1,150 different fruit and wood species in areas of Prudencia hydroelectric power plant, Dos Mares hydroelectric complex.

Memorandum of External Verification



External Audit Memorandum Independent Verification of the 2018 Annual Report

Scope of our Work

We have audited the adaption of the content of Celsia’s 2018 Annual Report of the Consolidated Set of GRI Sustainability Reporting Standards, hereinafter “GRI Standards”.

Verification Standards and Processes

We have performed our work in line with the ISAE 3000 – International Standard on Assurance Engagements Other than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standard Board (IAASB) of the International Federation of Accounts (IFAC).

Our audit consists of questioning Management, as well as other areas within Celsia that have participated in preparing the 2018 Annual Report, and applying certain analytical procedures and audit tests on samplings as described below:

- Interviews with Celsia employees to learn about management principles, systems and approaches applied in preparing the report.
- Analysis of how, through the materiality exercise, the report content and structure were defined in line with the suggestions of the GRI Standards.
- Analysis of the processes used to compile and validate the data presented in this report.
- Verification, through audit tests based on the selection of a sample of quantitative and qualitative information corresponding to the GRI content and Company content included in the Annual Report and its appropriate compiling using data supplied by Celsia’s sources of information.

It is confirmed that Celsia’s 2018 Annual Report is prepared in compliance with the essential option of the GRI Standards.

Basic general content:
It was confirmed that the report meets the requirements of the essential option “in accordance” with the GRI standards in terms of basic general content.

Responsibilities of Deloitte and Celsia Management

- Celsia’s 2018 Annual Report preparation and its contents are the responsibility of the Organization, which is also responsible for defining, adapting and maintaining the management and internal audit systems used to collect information.
- Our responsibility is to submit an independent report based on procedures applied in our audit.
- This report has been prepared exclusively in the interest of the Organization as agreed in the terms of our service proposal. We will not be held responsible by any third parties whatsoever, and only by Company Management.
- Our work was performed in line with independent audit standards required by the Code of Ethics of the International Federation of Accountants (IFAC).
- The scope of a limited audit is substantially less than that of a complete audit. Therefore, we provide no audit opinion about the Annual Report.



Deloitte & Touche Ltda.
Jorge Enrique Múnera D.
Partner

Basic specific content:
We reviewed the management approach and GRI content of the following material topics:

Material Topics	GRI and/or Celsia's Company Indicators
Economic Growth	201-1
Ethics and Transparency	205-1, 205-3, 415-1
Client Experience	419-1, C-E1
Business Diversification	C-IN1
Development of Human Talent and Occupational Health and Safety	401-1, 404-1, 404-3, 405-1, 405-2, C –CT1, 403-2, 102-41
Conservation of Ecosystems and Contribution to Society	413-1, LBG-03, EU22, 305-7, 302-1, 302-4, 306-1, 306-2, 306-3, 304-1, 304-3, 304-4, 412-1
Regulation	307-1
Energy Resource Management	303-1, 303-3
Sustainable Supply	204-1, 308-1, 308-2, 414-1, 414-2

Conclusions

As a result of our review, there is no aspect that would make us believe that Celsia’s 2018 Annual Report contains material errors or has not been prepared in accordance with the Consolidated Set of GRI Standards for writing sustainability reports.

Main Observations and Recommendations regarding GRI and WBCSD1 Principles

Materiality
General Observations
The Company’s commitment to develop a sustainability strategy aligned with its strategic management and long-term vision stands out.

1: World Business Council for Sustainable Development.

Recommendations
We have presented our recommendations where Celsia can improve areas to consolidate processes, programs and systems related to sustainability management. The most relevant recommendations are:

- Implement regular monitoring of progress in managing material topics and the indicators reported for each one of Celsia’s operations, which will make the year-end reporting process more efficient.

Exhaustiveness
General Observations
It is highlighted that Celsia has identified the challenges it faces regarding material topics.

Recommendations
Deloitte recommends continuing with the consolidation and standardization efforts of the processes and measurement of the strategic indicators, above all, in the different operations where Celsia works, to then carry out the timely assessment of the efficiency of the controls and performance of each one of the indicators for decision-making.

APPENDIX 1 Declaration of Independence

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We confirm that we are independent from Celsia. All our employees undertake annual refreshers on the Ethics Policy, where we specifically state that we have no conflicts of interest with Celsia, its subsidiaries or stakeholders.

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GRI Content Index

Basic General Content

GRI Standard	Name	Location	External Verification
Foundations			
101	Foundation: a. Reporting Principles; b. Using the GRI Standards for sustainability reporting; c. Making claims related to the use of the GRI Standards	About the Report, page 4	✓
Organizational Profile			
102-1	Name of the organization	Celsia S.A. E.S.P.	✓
102-2	Activities, brands, products and services	About Us, page 7	✓
102-3	Location of headquarters	The organization's headquarters is in Medellín, Antioquia, Colombia. Carrera 43A No. 1A sur - 143, Piso 5	✓
102-4	Number of countries where the organization operates, and the names of countries where it has significant operations and/or that are relevant to the topics covered in the report	About Us, page 7	✓
102-5	Ownership and legal form	Joint-Stock, Public Utility Company	✓
102-6	Markets served (including: geographic locations where products and services are offered; sectors served; and types of customers and beneficiaries)	About Us, page 7 Transmission and Distribution, page 79	✓
102-7	Scale of the organization (employees, operations, net sales, total capitalization, and quantity of products and services provided)	About Us, page 7, Sustainable Supply, page 50 Our People, page 92	✓
102-8	Information on employees and other workers	Our People, page 103 Our People appendix, pages 161-165	✓
102-9	A description of the organization's supply chain	Sustainable Supply, page 49	✓
102-10	Significant changes to the organization's size, structure, ownership, or supply chain during the reporting period	Management Report, page 10	✓
102-11	Whether and how the organization applies the Precautionary Principle or approach	Conservation of Ecosystems, page 132	✓
102-12	A list of externally-developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes, or which it endorses	About the Report, page 4 Acknowledgements and Certifications, page 8 https://www.celsia.com/es/nuestra-empresa/gobierno-corporativo/celsia/buenas-practicas/category/adhesiones	✓
102-13	A list of the main memberships of industry or other associations, and national or international advocacy organizations	Acknowledgements and Certifications, page 8	✓
Strategy and Risks			
102-14	A statement from the most senior decision-maker of the organization about the relevance of sustainability to the organization and its strategy for addressing sustainability	Letter from the Chairman of the Board, page 10	✓
102-15	A description of key impacts, risks, and opportunities	Risk Management, page 43	✓



Basic General Content

GRI Standard	Name	Location	External Verification
Ethics and Transparency			
102-16	A description of the organization’s values, principles, standards, and norms of behavior (including codes of conduct and ethics)	Page 32	✓
102-17	A description of internal and external mechanisms for seeking advice about ethical and lawful behavior, and organizational integrity; and reporting concerns about unethical or unlawful behavior	Page 32	✓
Corporate Governance			
102-18	Governance structure of the organization, including committees of the highest governance body	Pages 4, 26	✓
102-19	Process for delegating authority for economic, environmental, and social topics from the highest governance body to senior executives and other employees	Page 25	✓
102-20	Whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental, and social topics	Page 30	✓
102-21	Processes for consultation between stakeholders and the highest governance body on economic, environmental, and social topics	Page 28	✓
102-22	Composition of the highest governance body and its committees	Page 26	✓
102-23	Whether the chair of the highest governance body is also an executive officer in the organization	Page 23	✓
405-1	Diversity of governance bodies and employees	Page 26	✓
102-24	Nomination and selection processes for the highest governance body and its committees	Page 28	✓
102-25	Processes for the highest governance body to ensure conflicts of interest are avoided and managed	Page 28	✓
102-26	Highest governance body’s and senior executives’ roles in the development, approval, and updating of the organization’s purpose, value or mission statements, strategies, policies, and goals related to economic, environmental, and social topics	Page 28	✓
102-27	Measures taken to develop and enhance the highest governance body’s collective knowledge of economic, environmental, and social topics	Page 29	✓
102-28	Processes for evaluating the highest governance body’s performance with respect to governance of economic, environmental, and social topics, indicating whether such evaluation is independent or not, and its frequency	Page 29	✓
102-29	Highest governance body’s role in identifying and managing economic, environmental, and social topics and their impacts, risks, and opportunities	Page 28	✓
102-30	Highest governance body’s role in reviewing the effectiveness of the organization’s risk management processes for economic, environmental, and social topics	Page 28	✓
102-31	Frequency of the highest governance body’s review of economic, environmental, and social topics and their impacts, risks, and opportunities	Page 29	✓
102-32	The highest committee or position that formally reviews and approves the organization’s sustainability report and ensures that all material topics are covered	Page 4	✓



Basic General Content

GRI Standard	Name	Location	External Verification
102-33	Process for communicating critical concerns to the highest governance body	Page 28	✓
102-34	Nature and total number of critical concerns that were communicated to the highest governance body Mechanism(s) used to address and resolve critical concerns	Page 29	✓
102-35	Remuneration policies for the highest governance body and senior executives	Page 29	✓
102-36	Process for determining remuneration	Page 29	✓
102-37	How stakeholders' views are sought and taken into account regarding remuneration If applicable, the results of votes on remuneration policies and proposals	Page 29	✓
Stakeholder Engagement			
102-40	List of stakeholder groups	Our Businesses, page 59	✓
102-41	Collective bargaining agreements	Page 97	✓
102-42	Identifying and selecting stakeholders with whom to engage	Our Businesses, page 59	✓
102-43	Approach to stakeholder engagement	Our Businesses, page 59	✓
102-44	Key topics and concerns raised through stakeholder engagement, including how the organization has responded to those key topics and concerns, including through its reporting	Our Businesses, page 59	✓
Reporting Practice			
102-45	A list of all entities included in the organization's consolidated financial statements or equivalent documents Whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report	Page 4	✓
102-46	Defining report content and topic boundaries	Page 58	✓
102-47	A list of the material topics identified in the process for defining report content	Page 58	✓
102-48	The effect of any restatements of information given in previous reports, and the reasons for such restatements	There were no restatements	✓
102-49	Significant changes from previous reporting periods in the list of material topics and topic boundaries	Page 58	✓
102-50	Reporting period	Page 4	✓
102-51	If applicable, the date of the most recent previous report	January 1 to December 31, 2017	✓
102-52	Reporting cycle (such as annual, biennial, etc.)	Annual	✓
102-53	Contact point for questions regarding the report or its contents	Page 4	✓
102-54	Claims of reporting in accordance with the GRI Standards	Page 4	✓
102-55	GRI content index	Page 4	✓
102-56	External assurance	Page 4	✓



Basic General Content

GRI Standard	Name	Location	External Verification
102-47	A list of the material topics identified in the process for defining report content	Page 58	✓
102-48	The effect of any restatements of information given in previous reports, and the reasons for such restatements	There were no restatements	✓
102-49	Significant changes from previous reporting periods in the list of material topics and topic boundaries	Page 58	✓
102-50	Reporting period	Page 4	✓
102-51	If applicable, the date of the most recent previous report	January 1 to December 31, 2017	✓
102-52	Reporting cycle (such as annual, biennial, etc.)	Annual	✓
102-53	Contact point for questions regarding the report or its contents	Page 4	✓
102-54	Claims of reporting in accordance with the GRI Standards	Page 4	✓
102-55	GRI content index	Page 4	✓
102-56	External assurance	Page 4	✓



Our Actions

GRI Standard	Name	Location	External Verification
Ethics and Transparency			
205-1	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	Page 33	✓
205-2	Communication and training about anti-corruption policies and procedures	Page 33	
205-3	Confirmed incidents of corruption and actions taken	Page 34	✓
415-1	Total value of political contributions by country and recipient/beneficiary	Page 34	✓
Human Rights			
412-1	Operations that have been subject to human rights reviews or impact assessments	Page 37	✓
412-2	Employee training on human rights policies or procedures	Page 37	✓
Regulation			
307-1	Non-compliance with laws and regulations (environmental, commercial, labor and regarding the business)	A penalty imposed by the Superintendence of Public Utilities in 2014 was enforced in 2018	✓
Sustainable Supply			
204-1	Proportion of spending on local suppliers at significant locations of operation	Page 50	✓
308-1	Percentage of new suppliers that were screened using environmental criteria	Pages 51, 181	✓
308-2	Significant actual and potential negative environmental impacts in the supply chain and actions taken	Pages 51, 181	✓
414-1	Percentage of new suppliers that were screened using social criteria	Page 181	✓
414-2	Significant actual and potential negative social impacts in the supply chain and actions taken	Page 181	✓



Our Business

GRI Standard	Name	Location	External Verification
Generation			
EU1	Installed capacity, broken down by primary energy source and by regulatory regime	Page 62	
EU2	Net energy output, broken down by primary energy source and by regulatory regime	Page 66	
EU11	Average generation efficiency of thermal plants	Page 66	
EU30	Average plant availability factor by energy source and by regulatory regime	Page 67	
Transmission and Distribution			
EU4	Length of above and underground transmission and distribution lines by regulatory regime	Page 72	
EU12	Transmission and distribution losses as a percentage of total energy	Page 73	
EU28	Power outage frequency	Page 74	
EU29	Average power outage duration	Page 74	
Sales			
EU3	Number of residential, industrial, institutional and commercial customer accounts	Page 79	
C-CO1	Electricity sales	Page 80	
C-CO2	Collection index	Page 80	



Basic Specific Content

GRI Standard	Name	Location	Omission	External Verification
Material Topic: Economic Growth				
103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 86		✓
103-2	The management approach and its components	Pages 86, 87		✓
103-3	Evaluation of the management approach	Page 90		✓
201-1	Direct economic value generated and distributed, including revenues, operating costs, employee wages and benefits, donations and other community investments, economic value retained and payments to providers of capital and to governments	Page 88		✓
Material Topic: Our People				
103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 91		✓
103-2	The management approach and its components	Page 91		✓
103-3	Evaluation of the management approach	Page 102		✓
405-1	Diversity of governance bodies and employees	Page 98		✓
401-1	Total number and rate of new employee hires and average employee turnover during the reporting period by age group, gender and region	Pages 93, 166		✓
404-2	Programs for upgrading employee skills and transition assistance programs to facilitate continued employability and the management of career endings	Pages 94, 172		
404-1	Average hours of training per year per employee by gender and employee category	Pages 95, 169		✓
404-3	Percentage of total employees by gender and employee category receiving regular performance and career development reviews	Page 96		✓
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees by significant locations of operation	Page 97		
405-2	Ratio of basic salary and remuneration of women to men by significant locations of operation	Page 98		✓
403-2	Type and rate of injury, occupational disease, lost days, absences, and work-related fatalities, for all employees, by region and by gender	Page 170		✓
C-CT1	Frequency and severity indexes	Page 99		✓
202-1	Ratios of standard entry level wage by gender compared to local minimum wage in significant locations of operation	In an effort to improve the quality of life of our employees, the Company's minimum wage is greater than the amount established by law in each country where we operate.		



Basic Specific Content

GRI Standard	Name	Location	Omission	External Verification
402-1	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	At Celsia, we support processes of change in the Company, developing communication plans to make their scope and impact known in a timely manner. As such, there is no minimum number of weeks established for giving notice prior to putting into practice significant operational changes that could substantially affect employees and their elected representatives.		
EU18	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	Page 173		
403-1	Percentage of workers that are represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	100%		
C-CT2	Historical investment in training	Page 95		

Material Topic: Client Experience

103-1	Explanation of the material topic and its boundary	Page 103		✓
103-2	The management approach and its components	Pages 103, 104		✓
103-3	Evaluation of the management approach	Page 104		✓
EU27	Number of residential disconnections for non-payment, broken down by duration of the disconnection and by regulatory regime	Page 105		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Page 107		
419-1	Total monetary value of significant fines and non-monetary sanctions for non-compliance with laws and regulations in the social and economic area and the use of products and services	Page 107		✓
C-GC1	Results of surveys measuring customer satisfaction	Page 107		✓
C-GC2	Service indicators	Page 108		
C-GC3	NPS indicator	Page 108		

Material Topic: Energy Resource Management

103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 110		✓
103-2	The management approach and its components	Page 110		✓
103-3	Evaluation of the management approach	Page 111		✓



Basic Specific Content

GRI Standard	Name	Location	Omission	External Verification
303-1	Total water withdrawal by source	Page 112		✓
303-3	Percentage and total volume of water recycled and reused	Page 112		✓
C-RE1	Generation Resources	Page 113		
C-RE2	Optimized water for hydroelectric power generation	Page 111		
C-RE3	Number of trees planted (ReverdeC)	Page 111		
Material Topic: Business Diversification				
103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 115		✓
103-2	The management approach and its components	Pages 116, 117		✓
103-3	Evaluation of the management approach	Page 120		✓
C-IN1	Investment in innovation	Page 119		✓
Material Topic: Contribution to Society				
103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 121		✓
103-2	The management approach and its components	Pages 122, 122		✓
103-3	Evaluation of the management approach	Page 131		✓
LBG - 01	Number of beneficiaries of social investment	Pages 130, 178		
LBG - 02	Social investment in Colombia by line of action	Pages 130, 177		
LBG - 03	Type of social investment	Page 130		✓
LBG - 04	Mandatory vs. voluntary investment	Page 130		
203-1	Development and impact of infrastructure investments and services supported	Page 175		
203-2	Significant indirect economic impacts, including the extent of impacts	Page 176		
413-1	Percentage of operations with local community engagement, impact assessments, and development programs	Page 176		✓
413-2	Operations with significant actual and potential negative impacts on local communities	Page 176		
EU22	Relocations	We relocated a total of five people during 2018 for the works on the San Andrés hydro-electric power plant project		✓



Basic Specific Content

GRI Standard	Name	Location	Omission	External Verification
Material Topic: Conservation of Ecosystems (Environmental Management)				
103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 132		✓
103-2	The management approach and its components - Environmental costs, expenses and investments	Page 133		✓
103-3	Evaluation of the management approach	Page 136		✓
C-GA1	Electricity Sector Transfers	Page 135		
Material Topic: Conservation of Ecosystems (Climate Change and Emissions Management)				
103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 137		✓
103-2	The management approach and its components - Environmental costs, expenses and investments	Page 138		✓
103-3	Evaluation of the management approach			✓
305-1	Direct (Scope 1) GHG emissions	Page 140		
305-2	Energy indirect (Scope 2) GHG emissions	Page 140		
305-4	GHG emissions intensity	Page 142		
305-5	Reduction of GHG emissions	Page 140		
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Page 142		
Conservation of Ecosystems - Eco-efficiency				
103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 144		✓
103-2	The management approach and its components - Environmental costs, expenses and investments	Page 144		✓
103-3	Evaluation of the management approach	Page 136		
302-1	Energy consumption within the organization	Pages 146, 177		✓
302-3	Energy intensity	Page 147		
302-4	Reduction of energy consumption	Page 147		✓
306-1	Total water discharge by quality and destination	Page 149		✓
306-2	Total weight of waste by type and disposal method	Pages 150, 180		✓
306-3	Total number and volume of significant spills	There were no significant spills during 2018		✓



Basic Specific Content

GRI Standard	Name	Location	Omission	External Verification
Conservation of Ecosystems - Biodiversity				
103	Disclosures on Management Approach (DMA)			✓
103-1	Explanation of the material topic and its boundary	Page 152		✓
103-2	The management approach and its components - Environmental costs, expenses and investments	Page 153		✓
103-3	Evaluation of the management approach	Page 159		✓
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Page 158		✓
304-3	Habitats protected or restored	Page 182		✓
304-4	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk	Page 157		✓



Integrated Report Self-Assessment

We have prepared our 2018 report by following the principles and elements of the International Integrated Reporting Council (IIRC) with the aim to adequately inform our stakeholders about the material aspects that influence the Organization's capacity to generate value, its coordination of the strategy and its business model, taking into account the different risks and opportunities that arise.

In this 2018 Integrated Report, we present the following advances of the Organization from the report submitted in 2017:

- » We established a common understanding of sustainability: Celsia PermaneC.
- » We improved the report's structure to facilitate its reading and understanding of the content.
- » We presented monitoring of previous years' management with historical information.
- » We comprehensively included all the impacts in a balanced manner, both positive and negative, so that they are taken into account in the Company's value generation process and in the decisions that are made.
- » We made progress in monitoring management and the targets set in previous years, as well as in the future projection and establishment of targets for the short, medium and long term.

Applied principles of the Integrated Report:

Strategic Focus and Future Orientation

The report provides information on the monitoring of the Organization's new strategy and how it relates to its ability to create value in the short, medium and long term; and to its use of and effects on capital.

Connectivity of Information

This report provides a holistic picture of the combination, interrelatedness and dependencies between the factors that affect the Organization's ability to create value over time for its stakeholders.

Stakeholder Engagement

The 2018 Report provides insight into the nature and quality of the Organization's stakeholder engagement, including how and to what extent the Organization understands, takes into account and responds to their legitimate needs and interests.

Materiality

We carried out a new analysis process of our material topics and the relationship between them, the business model, the strategy, and the way in which Celsia generates value in the short, medium and long term.

Conciseness

The Organization has worked to create a report with the most relevant information expressed concisely for our stakeholders.

Reliability and Completeness

This report includes all material matters in a balanced way with the positive aspects as well as the opportunities for improvement. We also hired the Deloitte & Touche firm to verify the information, which is an independent third party for the Organization.

Consistency and Comparability

The 2018 Integrated Report is presented on a basis that is consistent over time and in a way that enables comparison with other organizations.

The elements of the Integrated Reporting Framework that have been applied in the writing of this report are presented below.



Elements of the integrated report’s framework
contained in the report

Content Element	Aspects Included
Organizational overview and external environment	Brands, products, services, markets it serves, countries in which it operates, size of the Organization
	Corporate values
	Value creation processes
Governance	Governance model
	Election, powers and delegation of responsibilities of the Board of Directors
	Corporate governance, ethics and transparency guidelines
Business model	What we do, material topics, risks, capital and what we obtain
Risks and opportunities	Business model risks, risk management, aligning risks with material aspects
Strategy and resource allocation	Capital used to obtain results
	BHAG, strategic imperatives
	Sustainability
Performance	Use of capital and what we obtain from the value creation process
	Significant performance figures
	Performance, major events and results
Future plans	2025 BHAG
	Challenges and actions for achieving the strategy in the short, medium and long term
Bases for preparation and presentation	Material topics
	Mechanisms for assessment of material topics
	Key performance indicators

In conclusion, we have made positive progress toward complying with the Integrated Reporting Framework compared to 2017, and we have taken the necessary measures to ensure its integrity. Nevertheless, we are aware of the challenges and opportunities for improvement that will bring us ever closer to the fulfillment of the reporting guidelines.

Yours faithfully,

Ricardo Sierra
CEO



To see the
2018 Financial
Statements, please
[click here](#)