



# CHILE: Telecoms and energy sectors soar on excellent infrastructure

Outstanding natural resources offering huge potential for zero-carbon fuels of the future, along with world-class telecoms networks and systems are helping to drive economic growth and socioeconomic development

# CHILE



To be published in the Davos issue at the World Economic Forum





# Dynamic digital market thrives on cutting-edge technology backbone

With some of the best infrastructure on the continent, it is no surprise that Chile is blazing a trail in the digital arena and also driving new forms of decarbonization

Chile's digital revolution and the determined energy transition to renewables that is gathering pace and receiving many international plaudits, continue to set the benchmarks for other countries across Latin America and beyond to learn from and follow.

The forward-thinking nation of 20 million people has promised to become a leading force in both sectors over the coming years and with its public and private sectors working hard to fulfil that pledge, international investors can find a wealth of opportunities throughout those two sectors, as well as many others.

Its excellent provision of fiber-based Internet connections is helping to fuel its powerful economic engine and benefiting millions of individuals and enterprises daily.

Significant investment in modern telecoms infrastructure over the past few years has created a series of state-of-the-art



**Enrique Coulembier**  
CEO, Mundo

networks for 56.7% of that total.

The outlook for digital service providers is extremely positive, with fixed broadband revenues expected to grow at a compound annual growth rate of 4.6% in 2021-2026.

This upbeat forecast is due in part to the pro-business government's proactive role in supporting the sector through initiatives

**With the investment of [US investor] DigitalBridge, we have an ideal partner to deploy networks at competitive prices and quickly reach more homes."**

Enrique Coulembier, CEO, Mundo

networks that offer fast and inexpensive data services for cell phones, mobile devices, computers and data-driven commercial and industrial hardware.

According to data compiled by industry body Subtel — an organization that is overseen by the Ministry of Transport and Telecommunications — Chile's dynamic digital market saw the number of fixed internet accesses jump 12.7% year-on-year to more than 4.3 million in late September 2022, with the amount of fiber-based connections account-

such as the Proyecto Nacional de Fibra Óptica (FON), the Fibra Óptica Austral and the deployment of 5G nationwide.

In the last five years, leading telecoms operator Mundo has established itself as an outstanding digital services provider with the second largest fiber optic network in the country. The firm has more than 700,000 customers and 10,000 kilometers of fiber optic trunk network. As experts in the deployment of fiber optics, Mundo is proud to have been a key player in the long-awaited



Plaza de las Armas, Santiago de Chile

reduction of the digital gap in Chile.

Not only does Mundo operate the fastest fiber optic network in Latin America, but its network is completely neutral, meaning it can be used by any company. The enterprise has also formed mutually beneficial alliances with the private sector to advance connectivity nationwide.

## Acquisition opens digital doors

In a clear show of faith earlier this year, Mundo was acquired by US-based global investment giant DigitalBridge. The new owner bills itself as the only dedicated, global-scale digital infrastructure firm investing across five key verticals: data centers, cell towers, fiber networks, small cells, and edge infrastructure.

The investment major has more than \$50 billion in assets under management and is focused on real assets exposed to resilient, growing markets, with Chile firmly fitting that profile. The acquisition was warmly welcomed by Mundo CEO, Enrique Coulembier, who is excited at the many opportunities it provides in supporting his country's growth plans and strengthening Mundo's business both inside and outside of Chile.

"With the investment of DigitalBridge, we have an ideal

partner to deploy networks at competitive prices and quickly reach more homes," he says. "The more networks we have deployed, the more home passes we will have, thus increasing our clientele and subscriptions to our services. We have many plans, which need support to be carried out in a timely manner."

Mundo's — and indeed Coulembier's — excellent work has not gone unnoticed, with the industry expert recently included in a prestigious list of the world's top executives, technologists, and disrupters to watch in 2022 and beyond. His presence in the coveted Network X 50 rankings is a feather in the cap of Mundo and the Chilean business sector.

Heading into 2023, the CEO is setting his sights on fresh growth and new benchmarks as Mundo seeks to boost Internet accessibility to everyone and encourage other telecommunications companies to bridge the digital divide. "We want to impact how other telecoms firms view their customers," he adds. "Mundo is extremely proud of its socially conscious team. We don't do things just by numbers; we also try to impact the daily life and day-to-day life of Chilean citizens. We are very proud of what we have achieved, but have much more to give."

**mundo**  
¡Tecnología al alcance de todos!

**GRUPO**  
**cerro**

# Economy electrified by green energy advance

Enviably solar and wind resources supported by government legislation that promotes zero-carbon energy projects has established the country as a hotspot for green fuels

With much of its incredibly long coastline and inland territory complemented by a hot, arid climate, Chile is making the most of its natural resources to attract billions of dollars of foreign direct investment (FDI) in renewable energies, especially in solar and wind power projects.

With a strategic location that means it lies opposite the large and lucrative energy markets of the Asia Pacific, the republic is well placed to take advantage of its favorable climate to generate zero-carbon energy derivatives like green hydrogen to serve industrial and agricultural customers at home and abroad.

The respected International Energy Agency (IEA) recently highlighted Chile's vast potential in renewables, noting an updated long-term energy policy was published by the government in mid-2022. The policy "re-emphasizes the pledge to net-zero, laying out a clear decarbonization pathway that addresses all sectors of the national economy," it said. "Chile has taken a globally leading role in clean energy, and emerged as a world-class destination for solar and wind energy developers."

Spearheading innovation and initiative in Chile's fast-growing clean energy sector is Grupo Cerro, a local company that now

manages more than 280MW of installed capacity. The ambitious firm is currently developing one of the world's largest Concentrated Solar Power (CSP) projects at Likana in the northern region of Antofagasta. The \$1.8 billion project will create 450-690MW of electricity once built.

"At Grupo Cerro, we have the goal of providing clean energy 24/7 to our clients," explains proud CEO, Fernando González. "That's what motivates us and that's what differentiates us, because we have a combination of technologies that can support delivering power 24/7. The core asset in our portfolio is the Cerro Denominador CSP. It generates 110MW at full capacity, but what makes it special is it offers 17.5 hours of storage in molten salts, which allows us to generate power through the night."

González believes Chile's resources for renewable energy are almost unlimited and he is looking forward to Grupo Cerro being at the forefront of the sector for many years. "We differentiate ourselves by only doing renew-



**Fernando González**  
CEO, Grupo Cerro

ables and producing electricity 24/7. Having the first CSP plant in Latin America puts us in a good position. If you want a grid that is 100% renewable, you need plants that can provide similar services to those provided by fossil-fuel plants. That can be done with a CSP.

"Earlier this year, we acquired a set of mini hydroelectric power plants which complement our initial portfolio. We would like to expand internationally, but that takes time. We are just starting."

**mundo**  
¡Tecnología al alcance de todos!

**THE FASTEST INTERNET IN LATIN AMERICA**

Based on analysis by Ookla® of Speedtest Intelligence® data for Q2-Q3 2022. Ookla trademarks used under license and reprinted with permission.

tumundo.cl

# Next-gen technologies drive Mundo's success

Working to reduce the digital divide is at the heart of telecoms provider Mundo's operations, with the incorporation of new technologies enabling the delivery of world-class services

Chile boasts one of the most dynamic digital markets in South America with the sector enjoying healthy levels of growth and investment. Here, Enrique Coulembier, CEO of major operator Mundo, reveals how his highly-successful company is leading the way when it comes to driving innovation and investment.

**PR: The number of fixed internet accesses in Chile jumped to over 4.3 million in 2022, with fiber-based connections accounting for nearly two-thirds of the total. What do you attribute the recent growth in the sector?**

**EC:** If we return to the basics of Chile, we must look at its geographical location as in many ways, it is very much an island. On one side you have the Andes mountain range, and on the other the ocean. Without a good internet connection, Chile could potentially be very isolated from the rest of the world.

Furthermore, Chile has been able to grow rapidly in many areas other than technology, due, in comparative terms to other Latin American countries, to its economic growth and political stability since the 1990s.

**PR: How does the acquisition by DigitalBridge support your growth plans for Chile and expansion into other countries?**

**EC:** In order for us to deploy networks at a fast and efficient pace, we need financial support. With the DigitalBridge investment, we have an ideal partner, firstly to deploy networks at competitive prices and quickly reach more homes. More networks mean more home passes, thus increasing our clientele and subscriptions. We have many plans, and those plans need support to be carried out in a timely manner.

In the case of Chile, a country that is adequately and strongly connected will allow growth in different areas, with more opportunities in each city and for all people, regardless of their social economic level. That will provide more opportunities for people, more education and also more opportunities for business and economic growth. We do not plan to stay only within Chile. With the right backing and support, we believe we can deploy to Latin America as well.

**PR: Fixed broadband revenues in Chile are expected to grow at a compound annual growth rate (CAGR) of 4.6% from 2021-2026. This is partly due to the proactive role of the government in launching initiatives that provide valuable support to the sector. What has been the impact of FON and what is the growing role of Mundo within the project?**

**EC:** Mundo already has 80% of its own networks deployed in the same sectors that the project would like to cover. It means that many of these towns have fiber already laid and deployed in those sectors. Mundo has enabled last-mile delivery in those sectors as well, so it is ready at any time for customers to be connected and have internet access.

We are proponents of subsidizing demand, not subsidizing private companies to create infrastructure that isn't precisely regulated accordingly. As we knew FON was going to take time, we generated our own interconnection network for clients in those towns, parallel to the FON.

Mundo has done this independently; because we have always been key players and actors in closing the digital divide, being the bridge to ensure that everyone has the same access. We not only deployed the interconnection network, but also became the last mile

We had to build our own technology which allowed us to become last-mile service providers. What started as a problem became something positive for us, as the infrastructure and technology is ours; we have the advantage when it comes to making decisions, we have the advantage when we decide how and when we are going to use it.

This has been one of the key impacts it has had on our growth and also our stability. We took a challenge, made it positive, and made it our own. We had to become innovative, we had to become profitable because we started very small and we had to source everything we needed that we couldn't get from a third party.

**PR: What is your final message to readers of Foreign Policy?**

**EC:** One of my personal objectives is to leave my mark in terms of connectivity at the national level, as the

**Our motto has always been the internet must be available to all and that we impact the behavior of competitors."**

Enrique Coulembier, CEO, Mundo

in those locations, with customers currently connected. Some of these towns only had 300 to 500 homes. We are there with the technology and with the customers.

**PR: What are some key factors surrounding the disruptive technologies that Mundo is now using and what have been their impacts on your operations?**

**EC:** When Mundo began, we were a very small fish in an extremely large ocean. We saw many obstacles, but such challenges and hurdles made us better as they gave us an advantage as we had to become independent and innovative.

leader of a company that has been able to connect towns, people, families and companies.

Our motto has always been the internet must be available to everyone, and that we also impact the behavior of other telecoms companies, so they realize that closing the digital divide is important for everyone. We would also like to impact how other telecoms firms view their customers and this connectivity process.

Mundo is extremely proud of its socially conscious team. We do not do things just by numbers; We also try to impact the daily life and day to day of Chilean citizens, and go where others do not want to go.

## Mundo's major investment in state-of-the-art internet infrastructure benefits all



### Vast nationwide network

Mundo's fiber optic network covers more than 65,000 kilometers



### Super fast 10G fiber network

A speed of up to 10 symmetrical gigabytes per second



### Social connectivity plan

Free internet access aims to reduce Chile's digital divide



### Present in 250 communes

With coverage in 11 of Chile's 15 regions, Mundo serves 850,000 customers



### Cellular client base grows

Mundo has 75,000 mobile phone customers



### Successful digital literacy

The plan has helped hundreds of older adults through an impressive 700 hours of digital training



### Excellent client support

Mundo's customer support centers offer comprehensive solutions



### Decades of experience

Mundo has been providing great service for nearly 30 years



Constant innovation and new infrastructure and technology has benefited Mundo



Mundo's outstanding human capital is reflected in the skillset of its 3,000 workers

## Mundo leads the way in rapid internet provision

As the recognized continental benchmark for speedy internet service, the telecoms titan is winning plenty of industry plaudits for the rapid pace of its broadband provision

Mundo found itself in the telecoms sector's spotlight last year as it was judged to have the fastest fixed internet network in Latin America. According to the results of tests performed by leading network intelligence and connectivity insight group, Ookla, Mundo provided the fastest service on the continent.

The recognition by the international consultant also underlined Mundo's commitment to ensuring as many people as pos-

sible have access to its outstanding services.

Mundo obtained 281.46 speed points, leading the ranking, followed by Costa Rica's Metrocom with 150.27, Movistar Colombia with 120.43 points and closing the list of the 10 evaluated countries, Trinidad and Tobago's Digicel+ with 80.99.

Recognition for "Latin America's Fastest Fixed Network" was determined by evaluating the Speed Score™ in Q2 and

Q3 2022. To determine the winners of the Speedtest Awards for Networks fixed, Ookla evaluated the fastest speeds achieved on a given network, regardless of the plan subscription.

The speeds delivered by Mundo were also the best nationwide, with 844.42 Mbps download, 843.5 Mbps upload and five ms latency. The excellent performance of some Chilean cities stood out, such as Santiago with 264, 79 download and 234.24 upload; El Bosque with 303.91 download and 306.41 upload; San Pedro de la Paz with 358.41 download and 364.56 upload.

Doug Suttles, CEO of Ookla said: "The Speedtest Awards, presented by Ookla, are reserved for an elite group of operators who have delivered exceptional internet service, performance and coverage within a market.

"It's a pleasure to present

Mundo with the award for Fastest Fixed Network in Latin America. This recognition is testament to their outstanding work in Q2 and Q3 2022 based on Ookla's rigorous analysis, with tests conducted by consumers with Speedtest."

For his part, the proud and delighted CEO of Mundo, Enrique Coulembier, stated that "the effort made by our entire team in a highly committed manner to reach where the others do not reach is the basis of our success."

"We firmly believe that all Chilean and migrant families have the right to have the best internet. This award encourages us to continue with more force, to open new horizons and reach other countries with our technology. We are very proud of what we have achieved, but without a doubt, we have much more to give."

## Comprehensive collaboration between private companies overcomes digital divide

Connecting isolated towns and villages to the world wide web to improve people's quality of life is one of Mundo's missions

When two of the country's most innovative and successful enterprises join forces to help thousands of people living on the margins of technological provision, the impressive results are life-enhancing in many ways.

An alliance between Mundo and mining major Antofagasta Minerals seeks to provide internet connectivity and digital literacy in the communities to different sectors of rural areas.

The pair recently shared skills and experience to bring digital services including internet, television and telephony to towns in the northern Coquimbo region, which were historically disconnected from technology.

The arrival of fiber optic broadband to various sectors of the commune of Los Vilos was achieved thanks to cooperation that encourages companies to finance the connectivity service

for individuals, families or communities lacking connectivity and unable to pay for access.

The exciting initiative also includes support for knowledge and education, thanks to Mundo's digital literacy plan and programs from the Fundación País Digital (Digital Country Foundation). The initiatives promote new development opportunities in the most rural areas as part of a nationwide drive to boost the development and dissemination of a digital culture.

The virtuous bond between the firms allowed the deployment of the exceptionally fast

Mundo fiber optic network in towns including Caimanes, Limahuida and La Punta in 2022.

In total, Mundo has built 500 kilometers of links and that figure is continuing to grow. "These initiatives are in line with our Zero Digital Gap plan, which states that if someone does not connect to the internet it is because they don't want to, rather than they can't," says Minister of Transport and Telecommunications, Juan Carlos Muñoz. "Connectivity provides support. In the long run, it improves people's quality of life and that is what we want for everyone."

# Grupo Cerro's renewables revolution accelerates

The firm's mission to drive the transformation of Chile's energy matrix while pursuing a solid commitment to sustainable power generation is proving a winner

A world leader in renewables development due to a potent energy mix featuring around 45% of power consumption from clean sources, Chile shows rich potential to become an exporter of clean energy in the future, as Fernando González, CEO of Grupo Cerro, discusses.

**PR: What are Chile's green energy industry's strengths and how do you project the sector's growth over the medium term?**

**FG:** Chile is a very long country that has amazing renewable resources, both solar and wind power. Solar in the north and wind in the north and south. What makes Chile different is 30 years of macroeconomic and political stability, while a pro-business approach helps investors to find a good place to invest.

Chile is still relying on fossil fuels to provide the balance of the energy produced in the country, but the country has set very ambitious goals to be carbon neutral by 2050. The main challenges now are how to effectively achieve that carbon neutrality in a way that is safe and economically efficient. These are not that different from those in other countries, basically in identifying what technologies are available to complement the variable renewables without using fossil fuels.

**“The resources for renewable energy in Chile are pretty much unlimited.”**

Fernando González, CEO, Grupo Cerro

The additional complexity is its geography, that requires strengthening of transmission networks to maximize the value of the almost unlimited wind and solar resources. I am very optimistic about the opportunities in Chile, both for internal consumption and for export.

**PR: Grupo Cerro now manages over 280MW of installed capacity in Chile and is developing one of the world's largest CSP projects, so what is your strategic vision and goals for your firm?**

**FG:** We have the goal of providing clean energy 24/7 to our clients. That's what motivates us and that's what differentiates us, because we have a combination of technologies that can support delivering power 24/7. The core asset in our portfolio is the CSP plant of Cerro Dominador, located in the north. It generates 110MW at full capacity.

What makes it special is its 17.5 hours of storage in molten salts, which allows us to generate through the night, even when there is no sun. It reflects the sunlight into a receiver located at the top of a tower. The heat is then transferred to a stream of molten salts that increase its temperature to 565 degree Celsius.

The heated salts are then stored in tanks and used later to produce steam from water, which spins a turbine and generator, producing electricity. We complement the generation from the CSP with a 100MW photovoltaic plant. We also acquired a set of mini hydroelectric power plants in 2022. They are a good complement to our initial portfolio because, even though some of them have a seasonal profile, they generate electricity 24 hours a day.

The Likana CSP is a 690MW concentrated solar project that we are developing. It consists of three towers, like the ones at Cerro Dom-

inador, but with bigger generating capacity. Combined with the 600MW Pampa Union project, it can produce clean solar power 24 hours a day, seven days a week.

I mentioned before Chile's call to be carbon neutral and the country's current dependency on fossil fuels for grid stability. CSP is ideally placed to be the natural replacement of the fossil fuel plants: the difference between CSP and the other renewables is that you separate the generation from the resource availability at any point in time. With the wind and PV

solar, you generate when there is wind and when there is sun and that is it.

CSP provides the flexibility that the system of the future needs. It is not the only one, but it is a key one in terms of size that can make a big difference. There is a substantial installed capacity in fossil fuels. To replace that if we want to become a fully renewable grid, we need to have these types of plants.

**PR: What would you say is your firm's role in Chile's transition to green energy production?**

**FG:** We play a very critical role. The system needs plants that can increase and decrease production when needed; that is called flexibility.

If you really want to have a grid that is 100% renewable, you need to have plants that can provide similar services than those provided by fossil-fuel plants. That can be done with a CSP.

**PR: How are you promoting your brand to an international audience, particularly to those looking to invest in the green economy?**

**FG:** We differentiate ourselves by only doing renewables, and producing electricity 24/7; it really is as simple as that. Obviously, having the first CSP plant in Latin America puts us in a good position. We would like to expand internationally, but that takes time. We are just starting.

**PR: Do you have a final message for the readers of Foreign Policy about choosing Chile as their next business and investment destination, particularly in the clean energy sector?**

**FG:** I continue to be very bullish about Chile as the country has shown tremendous growth during the last few decades. I am confident that such a positive trend will continue. The resources for renewable energy are pretty much unlimited in the country.

Of course, there are challenges like every country, particularly with respect to a full transition to renewables and creating the right regulatory signals for that transition to happen as soon as possible; but I am confident that that will be the case. I am very excited about doing business in Chile.

## Key facts: Cerro Dominador CSP Plant



**Decarbonization success**  
Around 400,000 tonnes of CO<sub>2</sub> have been avoided thanks to the towering facility



**Searingly hot salts are key**  
Absorption of radiation by heating a stream of cold molten salts to a temperature of 565°C/1049°F



**Modern miracle of technology**  
Solar energy is captured through giant mirrors that follow the path of the sun with two-axis movement. These are aimed at the receiver located at the top of the tower



**Located in arid Antofagasta**  
The showcase project in the northern region comprises 10,600 heliostats, and the solar field measures over 700 hectares



**Renewable energy**  
The plant creates electrical energy by means of a steam turbine



**Sustainable values shine**  
The heat storage system consists of cold and hot salt tanks for the production of energy day and night

