



## **Request for Information (RFI)**

# **Technical, legal, geopolitical, and economic feasibility study of the submarine cable of Antarctica Connection Project**

Issued: January 21<sup>st</sup>, 2022  
Submission Deadline: February 28<sup>th</sup>, 2022

## I. BACKGROUND

Fondo de Infraestructura S.A.<sup>1</sup> ("Desarrollo País") aims to develop financing and investment business activities related to infrastructure projects in Chile. Desarrollo País seeks to promote the development of infrastructure projects that will improve the wellbeing of Chile and its citizens by fulfilling the country's long-term infrastructure needs through the development of projects both economically and socially profitable.

In this way, Desarrollo País is in a constant search to develop digital projects that the country needs. Antarctica is a region with low level of connectivity that needs urgently to improve its access to communication that, given the research activities found there, it would benefit immensely from having better connectivity. Therefore, Desarrollo País has decided to analyze Antarctica Connection Project ("Project") that aims to deploy the first fiber optic submarine cable to Antarctica.

On the other hand, the Undersecretariat of Telecommunications ("SUBTEL") is a body dependent on the Ministry of Transportation and Telecommunications of Chile. Its work is aimed at coordinating, promoting, encouraging, and developing telecommunications in Chile, transforming this sector in an engine for the economic and social development of the country.

SUBTEL's main functions are to propose national policies on telecommunications matters, in accordance with Government guidelines, conduct and control of their implementation, supervise telecommunications public and private companies in the country, controlling compliance with relevant laws, regulations and standards.

In turn, the administrative division of the country sets the superior administration of sub-national territories through regional governments, dual entities composed of the regional governor, as its executive body and by the regional council, a regulatory, supervisory, and decision-making collegiate body. The objective of the regional governments is the economic and social development of the Chilean Regions, exercising functions in terms of territorial planning, the promotion of production and the social and cultural development of its inhabitants, with investment budgets.

The Regional Governors assumed functions as of July 14<sup>th</sup>, 2021, launching a process of political decentralization, since these new authorities were elected by universal suffrage, disappearing the position of Regional Mayor, who previously served as the executive body of regional governments and was an immediate agent of the President of the Republic, appointed by him/her.

Antarctica Connection Project has a significant importance to the Regional Government of Magallanes and Chilean Antarctica ("Regional Government"), as its name suggests, as well as the Regional Governor's program, where science, connectivity, logistics and tourism, have a special position with respect to the white continent.

Given the potential of Antarctica Connection Project, Desarrollo País has decided to move forward by leading the initiative with the support of SUBTEL and the Regional Government.

## II. INTRODUCTION

In recent years, Antarctica has become as one of the most important research sites in the world, given the unique features it offers. It currently develops numerous research initiatives with the aim of studying

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<sup>1</sup> Governed by Law 21082

several global phenomena, such as climate change, evolutionary and ecological processes, astronomy and cosmology, pollution, fishing activity, among others.

This potential is not just limited to the creation of knowledge in these critical areas for the future of humanity, but also it enables the development of significant capabilities for the future of the country and the world, for instance, engineering associated with nature-observation systems, processing of large volumes of data and artificial intelligence, among others, through the deployment of this submarine cable.

However, research and other activities that take place in Antarctica are severely constrained by limited digital connectivity access. Currently, communications rely on a limited number of satellites with reduced bandwidths and high costs, resulting in limited communication to and from Antarctica.

Therefore, the deployment of a fiber optic submarine cable from Chile to Antarctica is expected to be the best solution to improve communications, given the capability and reliability it offers compared to a satellite solution. Considering the geographical and climatic characteristics of Antarctica, the technical challenge of constructing a fiber optic submarine cable is high and it must be studied in detail.

On the other hand, Chile, through SUBTEL, subsidized the deployment of the submarine cable Fibra Óptica Austral that built the closest cable landing station to Antarctica, located in Puerto Williams, Magallanes Region. This cable landing station provides a unique opportunity for the deployment of a submarine cable to Antarctica because it reduces submarine cable length and cost, it can interconnect with terrestrial networks in Magallanes Region, and it sets a high-capacity channel for the proper development of all activities in Antarctica.

With all that said, Chile has decided to analyze the possibility of building the first fiber optic submarine cable to provide a strong digital connectivity to Antarctica. The potential route involves 1,000 km of length approximately from Puerto Williams to Antarctica.

Antarctica Connection Project is an extremely ambitious initiative because it will allow Antarctica to have proper communications for its regular activities, it will promote cooperation, and it will encourage scientific development.

### III. RECENT SUBMARINE CABLE PROJECTS IN CHILE

Starting in 2014, new submarine cable projects were developed to contribute to the connectivity of Chile, including the southernmost areas of the country. In the latter area, the Government of Chile has led projects through Public-Private Partnerships (“PPP”), which aim to improve southern connectivity and, therefore, facilitate the execution of a new submarine cable to Antarctica. The most important projects include:

1. Humboldt: PPP promoted by the Government of Chile, led by Desarrollo País. Its ready-for-service date is expected by 2025. The submarine cable will connect Valparaíso (Chile), Auckland (New Zealand) and Sydney (Australia), becoming the first submarine cable to cross the South Pacific.
2. Fibra Óptica Austral (FOA): PPP between CTR and SUBTEL and operational since 2020. It connects Puerto Montt, Tortel, Punta Arenas and Puerto Williams, becoming the southernmost submarine cable in the world.
3. Prat: Owned by GTD (Chile) and operational since 2020. It connects Puerto Montt, Valparaíso and Arica, among other Chilean cities, strengthening the terrestrial fiber optic backbone network that is developed in Chile from north to south.

4. Mistral: Owned by América Móvil (Claro) and Telxius (Telefónica) and operational since 2021. It connects Chile (Valparaíso and Arica), Peru, Ecuador and Guatemala (Central America).
5. Curie: Owned by Google and operational since 2021. It connects Chile (Valparaíso), Panama and the coast of United States by the Pacific Ocean.



#### IV. REQUEST FOR INFORMATION OBJECTIVES

The purpose of this Request for Information (“RFI”) is to collect information from relevant suppliers to assist Desarrollo País to develop a feasibility study (“Feasibility Study”) about the technical, legal, and economic feasibility needed to build a fiber-optic submarine cable between Chile and Antarctica.

Desarrollo País is developing this RFI process with the strong support and collaboration of both SUBTEL and the Regional Government, who will provide such support within the scope of their competencies, already described.

## V. EXPECTED CONTENTS AND RESULTS OF THE FEASIBILITY STUDY

Main expected results of the Feasibility Study are:

- Know the technical, legal, geopolitical, and economic feasibility related to the deployment of a fiber optic submarine cable to Antarctica
- Alternatives of interconnecting international bases and research centers located at the Antarctic peninsula and its nearby islands.
- Estimate the impact that this unprecedented project would have.

Some of the expected contents of the Feasibility Study are at least the followings:

1. Economic, financial, and scientific report
  - a. Project financial evaluation.
  - b. Project cost-benefit analysis.
  - c. Project scientific evaluation.
  - d. Business and operation model.
  - e. Model and sources of funding.
  - f. Risks analysis and its mitigation.
2. Technical report
  - a. Desktop study on submarine cable.
  - b. Project associated costs.
  - c. Analysis and design of technological alternatives to provide connectivity to international bases from submarine cable landing point.
  - d. Study of comparable cases that have had similar technical challenges to this project, for example, cables in the Arctic.
  - e. Risks analysis and its mitigation.
3. Legal report
  - a. Management and governance model
  - b. Regulatory framework for deployment and operation of submarine cable and other potentially required technologies.
  - c. Permits required for submarine and potentially terrestrial intervention
  - d. Risk analysis and mitigation.

## VI. RFI GENERAL CONDITIONS

### RFI Timeline

Publication of RFI	January 21 <sup>st</sup> , 2022
Deadline for requesting a meeting	February 21 <sup>st</sup> , 2022
Deadline for submitting information and letter of expression of interest	February 28 <sup>th</sup> , 2022

The deadlines set out in this instrument are fatal. The time zone for all purposes will be the one that governs the Metropolitan Region of Santiago de Chile.

### RFI process

- a) RFI will be published on Desarrollo País' website (<https://www.desarrollopais.cl/>), on SUBTEL's website (<https://www.subtel.gob.cl/>) and on Regional Government's website

(<https://www.goremagallanes.cl>) providing full details of the activities and instructions for participation in RFI.

- b) Those interested in participating in this call will be able to ask questions and request clarifications regarding this RFI, in Spanish or English, by e-mail to Natalia López ([nlopez@desarrollopais.cl](mailto:nlopez@desarrollopais.cl)) and Andrés Contreras ([acontreras@desarrollopais.cl](mailto:acontreras@desarrollopais.cl)).

Through these e-mails interested parties can also request a meeting via videoconference, no later than February 21<sup>st</sup>, 2022.

Queries sent must indicate a name and contact email. No consultations may be accepted or answered to by any means other than those indicated above

- c) Desarrollo País may modify the provisions of this document and its Annexes, either on its own initiative or in response to a clarification requested by one of the potential informants, before the deadline for submitting the requested information.
- d) The modifications carried out will be informed on Desarrollo País' website (<https://www.desarrollopais.cl/>), on SUBTEL's website (<https://www.subtel.gob.cl/>) and on Regional Government's website (<https://www.goremagallanes.cl>). These amendments shall form an integral part of this document:
- Along with the publication of the amendment, a new deadline may be set for the submission the information requested.
  - In all cases, it will be mandatory for potential informants to periodically review this process on Desarrollo País' website (<https://www.desarrollopais.cl/>), on SUBTEL's website (<https://www.subtel.gob.cl/>) and on Regional Government's website (<https://www.goremagallanes.cl>) and take care of any modifications made.
- e) Responses to RFI must be sent by e-mail to Natalia López ([nlopez@desarrollopais.cl](mailto:nlopez@desarrollopais.cl)) and Andrés Contreras ([acontreras@desarrollopais.cl](mailto:acontreras@desarrollopais.cl)) until 11:59pm on February 28<sup>th</sup>, 2022.
- f) The responses to the RFI must contain the information referred in section VII, and forms included in Annex A and B of this document must be used for this purpose. These forms will be available on Desarrollo País' website (<https://www.desarrollopais.cl/>), on SUBTEL's website (<https://www.subtel.gob.cl/>) and on Regional Government's website (<https://www.goremagallanes.cl>) for potential informants to provide the information requested and send it to the e-mails indicated in the preceding paragraph.
- g) In the event that the informant considers that there is a relevant issue that has not been covered in this document, it is possible to incorporate it in its response to this RFI. Also, informant may attach to his response any additional information he/she considers useful.
- h) It should be noted that the answers submitted to RFI are referential and do not establish any obligation between the informant and Desarrollo País. In that way, it is possible that the informant does not have all the information requested, therefore, it is suggested to leave blank those questions which neither is not in its knowledge nor within its scope to answer.
- i) After submitting the answers to the RFI, Desarrollo País can contact informants to ask or answer questions that aim to specify further information.

- j) The evaluation of the information received does not follow an eligibility or award criterion, since the main objective of the RFI is to collect and analyze relevant information that the industry can provide to drive the Antarctic Connection feasibility study. This information is key to design and plan an eventual future request for proposal ("RFP") stage, where there will be criteria for eligibility and award of proposals that may be received.

## Participants

National or foreign natural or juridical persons may participate in this RFI process, that must respond to the information requested in Annex A and B of this document, who will have the status of "informants".

## Language

The official language of the RFI process is Spanish. However, answers, communications and interactions that take place during this process and the additional material that may be sent by the informant may be received in English. In this case, informant assumes the responsibility for how that information will be interpreted by Desarrollo País.

## General aspects

Desarrollo País reserves the right to resolve any dispute or doubt as to the correct meaning and scope, form and opportunity of application, and any other interpretative conflict that may arise from the application of this instrument.

## Responsibilities of the parties

By participating in the RFI process, informants should take into consideration the following:

1. The fact that informants respond to Annexes A and B, does not commit Desarrollo País in any area.
2. By responding and submitting Annexes A and B, the informants do not commit themselves in any area with Desarrollo País.
3. Desarrollo País will maintain the confidentiality of all information submitted by informants that is not of a public nature or of general knowledge.

## Participation expenses in the RFI

All expenses and costs of any kind incurred by informants when participating in the RFI process will be their exclusive responsibility, without having the right to demand from Desarrollo País a reimbursement or compensation for that concept or any other that has been originated as a result of this process.

## Confidentiality of information

This document does not contractually bind any of the parties with the information that is requested and provided, since it corresponds to a market research process.

All the information provided and requested by Desarrollo País, and the information provided by informants is considered confidential for internal purposes, without prejudice to the provisions of Law No 20285 on Access to Public Information, and the rights that holders of the provided information have for limiting its dissemination.



Informants must maintain confidentiality of all information provided by Desarrollo País during this RFI, therefore, they may not use it for the presentation of their services in other organizations or for any other purpose other than the one intended here.

The informant and Desarrollo País undertake to keep confidential information secret, whose nature is reserved or whose disclosure could affect their commercial or economic rights of the other. They must also adopt all measures reasonably necessary to guarantee that it is not revealed or disclosed by their employees or agents in compliance with the commitment established herein.

This is without prejudice to the provision of information that Desarrollo País must make to its supervisory entities, or in compliance with resolutions or decisions of other State agencies with powers to order its disclosure in accordance with the applicable legal framework, or in compliance with judicial decisions issued from the Ordinary Courts of Justice.

## VII. RFI QUESTIONS

Desarrollo País S.A. is interested in knowing:

1. General information about the natural person or company responding to this RFI.
2. Main characteristics to be satisfied by the supplier participating in the Feasibility Study.
3. Besides items described in section V, what do you think are key items to be covered in a study of this magnitude? In your experience, what are the main obstacles or challenges in building a submarine cable to Antarctica?
4. About the Project scientific evaluation described in section V, it is expected that it should include at least the following:
  - i. Identification of initiatives and entities currently in operation and planned to operate during lifetime of the submarine cable that would be benefited from this infrastructure.
  - ii. Estimation of the scientific impact enabled by the capacity increase, in terms of accelerating processes or other mechanisms.
  - iii. Identification of possible applications to the economy provided by these scientific projects.
  - iv. Estimation of the financial impact consequence of previous points i. to iii.

What other aspects do you think can be included in the Project scientific evaluation?

5. Based on your experience, what do you think would be the minimum and maximum period, in months, required for the development of this Feasibility Study?

Minimum period (months)	Maximum period (months)

6. What would be the reference price for a study with these characteristics? Develop your answer by detailing the cost for each activity you estimate is required, the respective unit costs and total cost.
7. Identify key sources of information to achieve expected results.



8. Is it possible to cover all the proposed contents in a consultancy? If it is not possible, identify contents that can be covered.

## Annex A: Required information

### Technical, legal, geopolitical, and economic feasibility study of the submarine cable project: Antarctica Connection

Informant Name:

Company she/he represents (if applicable):

Contact Email:

Question	Answer	
1. General information about the natural person or company responding to this RFI.		
2. Main characteristics to be satisfied by the supplier participating in the Feasibility Study.		
3. Besides items described in section V, what do you think are key items to be covered in a study of this magnitude? In your experience, what are the main obstacles or challenges in building a submarine cable to Antarctica?		
4. What other aspects do you think can be included in the Project scientific evaluation?		
5. Based on your experience, what do you think would be the minimum and maximum period, in months, required for the development of this Feasibility Study?	Minimum period (months)	Maximum period (months)
6. What would be the reference price for a study with these characteristics? Develop your answer by detailing the cost for each activity you estimate is required, the respective unit costs and total cost.		

7. Identify key sources of information to achieve expected results.	
8. Is it possible to cover all the proposed contents in a consultancy? If it is not possible, identify contents that can be covered.	

## Annex B: Letter of expression of interest

[Date]

Patricio Rey Sommer  
General Manager  
Fondo de Infraestructura S.A.

In my status of informant, [informant name or informant company name], [ID's informant], I express our interest in participating in the process of Request for Information (RFI): Technical, legal, geopolitical, economic and financial feasibility study of the Antarctica Connection project".

Likewise, through this letter, on behalf of my representative, I declare that I am aware of and accept the terms, deadlines and conditions as set forth in the RFI, referred to in the previous paragraph.

[Name]  
[Position]  
[Informant's company name]