Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Atlantica is a sustainable infrastructure company with the majority of its activities in renewable energy. We own and manage renewable energy, efficient natural gas, transmission and transportation infrastructures and water assets in North America, South America and EMEA. We intend to expand our business, maintaining North America, South America and Europe as our core geographies. Our business operations reduce greenhouse gas emissions contributing to mitigate the impact of climate change. In 2018 Atlantica avoided almost 5 million tons of CO2 in power generation versus the emissions an equivalent fossil fuel fleet would have generated. We intend to maintain 80% of our revenues generated from low-carbon footprint assets including our renewables, transportation and transmission infrastructures and water assets. Approximately 76% of our 2018 revenues were generated by our renewable energy assets including solar and wind.

Atlantica is a UK company listed on Nasdaq Global Select Market under the ticker symbol "AY". Our assets generated in 2018 revenues of $1,043 million and Adjusted EBITDA of $858.7 million. Atlantica had 217 employees as of December 31, 2018, 40% of which were women.

As of December 31, 2018 Atlantica owns or has interests in 24 assets, comprising 1,496 MW of renewable energy generation, 300 MW of efficient natural gas power generation, 10.5 M ft3 per day of water desalination and 1,152 miles of electric transmission lines. All of our assets have contracted revenues (regulated revenues in the case of our Spanish assets and Chile TL3) with low-risk off-takers and collectively have a weighted average remaining contract life of approximately 18 years as of December 31, 2018.

Approximately 50% of the world’s power generation by 2050 is expected to come from renewable sources, indicating that a very large part of new investments in power will be in renewble generation. We believe that during the next 10-20 years investments in renewable energy will be complemented with investments in what we call renewable enablers, transmission, natural gas and storage. Large investments will be required in new “smarter” transmission and distribution networks, in efficient natural gas plants that can support renewable energies over the mid-term and in energy storage that will become economically efficient over time. Growth opportunities are enormous and Atlantica is at the forefront of this transformation with experience in all these sectors. In fact, we recently made our first investment in large scale electric battery storage.In addition, we believe that water is going to be the next frontier in a transition towards a more sustainable world. New sources of water are needed worldwide, and water desalination and water transportation infrastructure should help make that possible.

As a United Kingdom company, Atlantica is subject to, and is in compliance with the requirements of the Climate Change Act 2008 for greenhouse gas emissions reporting. Additionally, our greenhouse gas emissions management complies with the requirements of the Commission Regulation (EU) No 601/2012. Our goal is to reduce our emission rate per unit of energy generated by 10% by 2030. Our Board is committed to maintaining 80% of our revenues generated from low-carbon footprint including our renewable, transportation and transmission infrastructures and water assets.

In addition, as part of its commitment with sustainability, Atlantica joined the United Nations Global Compact (the "UNGC") initiative in January 2018 and has formally adopted the UN Global Compact Ten Principles. Atlantica is committed to orient its action to 6 of the 17 Sustainable Development Goals. The core goals for Atlantica include SDG13 (Climate Change), where we believe we can have a significant impact. Atlantica has been rated by Sustainalytics in December 2018 on its Environment, Social and Governance factors as the top company within renewables, second within the broader utilities sector and in the top 3% in the global ratings universe. in the fields of human rights, labor, environment and anticorruption. We are determined to make the UNGC and its principles an integral part of the strategy, culture and day-to-day operations of the Company.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Row 1	January 1, 2018	December 31, 2018	No

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

Algeria
Chile
Mexico
Peru
South Africa
Spain
United States of America
Uruguay

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation

Transmission

Other divisions

Battery storage

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	The Chief Executive Officer acting as Director of Board has a leading position and responsibility over climate-related issues. The Board has responsibility over climate-related issues. Atlantica's Board is committed to maintaining 80% of its revenues generated from low-carbon footprint including its renewable, transportation and transmission infrastructures and water assets. The Board is also committed to reduce our emission rate per unit of energy generated by 10% by 2030. When evaluating acquisitions, the Board of Directors takes into consideration the impact of each acquisition on our climate change related targets. The achievement of these targets is reviewed by top management in our Environment Committee, which is held once a month. We also report to our Board

	during ever Board meeting on the progress of our ESG plan, including climate related issues when applicable. We report semi-annually on the main environmental indicators, including GHG emissions, water and waste.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding risk management policies Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures	ESG issues are included in the agenda of every board meeting while climate related issues are included in some board meetings agendas. The Board of Directors of Atlantica is responsible for the oversight of climate-related risks and opportunities. Atlantica's Board is committed to maintaining 80% of its revenues generated from low-carbon footprint including its renewable, transportation and transmission infrastructures and water assets. The Board of Directors is also committed to reduce our emission rate per unit of energy generated by 10% by 2030. The achievement of these targets is reviewed by top management in our Environment Committee, which is held once a month. We also report to our Board during every board meeting on the progress of our ESG plan and semi-annually on the main environmental indicators (GHG, water and waste). In addition, when the Board of Directors evaluates a potential acquisition, emissions and environmental factors are taken into account.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

Business unit manager	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Head of Operations	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Risks Officer (CRO)	Assessing climate-related risks and opportunities	More frequently than quarterly
Risk committee	Assessing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Head of ESG	Assessing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Environment and ESG Committee	Assessing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Safety, Health, Environment and Quality Committee	Assessing climate-related risks and opportunities	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

i where in the organization this position lies:

The Board of Directors is the highest level of responsability for climate change since is the ultimate decision-making body. The Board of Directors of Atlantica is responsible for the oversight of climate-related risks and opportunities. The Board also oversees the implementation of our environmental and ESG initiatives and prioritizwa our internal resources committed to the advancement of our ESG objectives. The Board reviews during every board meeting all material ESG aspects including environmental and climate change matters.

At the management level we have established an Environment and ESG Committee which is held monthly. Environment and ESG Committee members are our CEO, our Head of Operations and Vice-Presidents of each geography and Head of ESG, The committee is represented by the most senior level of management due to the importance of the matters under its responsibility. It allows visibility, prioritization and immediate action on environment and climate change issues. The committee provides Vice-Presidents of each geography an opportunity to address, discuss and agree on solutions in their geographies with involvement and intermediation of the CEO. Meetings are held monthly.

At the asset level, there is a Safety, Health, Environment and Quality committee between the corporate operations department and each asset manager. The responsibility of the committee

includes a follow-up of Health & Safety KPs, Environmental KPIs, audits, improvement, accidents and management system review of each asset.

ii **A rationale of why responsibilities for climate-related issues have been assigned to this position**

Under English law, the Board of Directors is responsible for management, administration and representation of all matters concerning the relevant business, subject to the provisions of relevant constitutional documents, applicable law and regulations, and resolutions duly adopted at general shareholders' meetings.

The ESG Commitee sits in a prime position to provide the Board with relevant information to take into account climate-related risks and opportunities in strategic decision making.

Additionally one of our key Corporate values is sustainability. We have therefore placed climate related issues oversight and management as a key Corporate priority.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Who is entitled to benefit from these incentives?

Business unit manager

Types of incentives

Recognition (non-monetary)

Activity incentivized

Environmental criteria included in purchases

Comment

In our Annual Strategy Management Meeting, we give awards to our best asset in terms of Environment for the previous year. In 2018 our Mojave solar asset received that award.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	1	2	Being a renewable energy company, environmental matters are an integral part of our strategy and operations, hence we consider them on the same time horizons as any other strategic and capital planning. We consider 1-2 years as a short-term horizon in our planning.
Medium-term	2	5	We consider 2-5 years as a medium-term horizon in our planning.
Long-term	5	30	We consider a long-term horizon periods over 5 years.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Once a quarter we update our risk assessment for every asset and we consolidate these analysis and include a growth risk asssessment. The analysis looks at the whole life of each asset, that is typically longer than 20-30 years.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Atlantica employs a risk map which adopts a multidisciplinary approach for identifying risks in different areas, assigning probability distributions and measuring economic impact in order to

propose action plans to mitigate main risks. The risk map contains a questionnaire regarding risk indicators and economic impact. Once all information is compiled, key conclusions can be outlined in a report.This report includes the risk assessment, mitigation strategies, deadlines and responsible parties to act. The process is generally as follows:

1. We identify a person(s) in charge of providing for each asset the information needed to the risk department.
2. Regular and periodic meetings are held with the parties involved to complete and define risk map questionnaires and risk indicators.
3. The risk department has the responsibility to update and complete the risk map with the updated information on a continuous basis.
4. The risk department analyzes and prepares conclusions.
5. Conclusions are discussed with the VPs (heads of each georgaphy) and presented at the risk committees with management to update the analysis and plans.

Periodic committes are held among our Operations, Environmental and Quality Departments and the Asset Managers of each asset. These working groups define action plans as well

When we evaluate potential acquisitions, we evaluate all potential risks of the asset, including climate change-related risks. In addition, we take into account how the potential acquisition will impact our emissions and clean revenue mix goals.

Risks procedures define 4-levels of risks as a funtion of its potential substantive financial impact and its probability. In terms of financial impact we define: (1) Very high > 50 million, (2) High 10-50 million, (3) Medium $1-10 million . In our internal policies we define as low level of risk those with a potential financial impact lower than $ 1 million.

Since Atlantica's incorporation in 2013 Sustainability has been one of our five core values. Climate change is not only a risk factor, for Atlantica it also represents a growth opportunity. We believe that renewable energy should represent the majority of new power generation in the short and mid-term and eventually should be the only way to generate our power. Atlantica expects to grow its business significantly in renewables in the upcoming years.

Atlantica has adopted TCFD´s risk terminology as a reference, it can be found in our ESG Report 2018.

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain

Current regulation	Relevant, always included	Existing regulation is always considered in the risk assessments of Atlantica. Non-compliance with current regulation could represent a critical risk for the company. Atlantica considers that current regulation is a relevant risk and accounts for it in the risk matrix. Atlantica is directly affected by environmental regulation in all our assets. This includes climate-related risks driven by laws, regulation, taxation, disclosure of emissions and other practices. Environmental regulation, among other things, requires us to obtain and maintain regulatory licenses, permits and other approvals and comply with the requirements of such licenses and permits. We are also required to perform environmental impact studies on projects. Our risk would be not to comply with all the current environmental regulations. These assets are regulated for air quality, permits as well as GHG documentation and reporting by different agencies in each geography under the EU ETS carbon regulation. In the United States, our 2 solar plants with a total capacity of 560 MW are subject to the permits under the Clean Air Act, Clean Water Act as well as requirements under the biological conditions, noise ordinance and storm water control regulations. In addition, as a United Kingdom company, Atlantica is subject to, and is in compliance with the requirements of the Climate Change Act 2008 for greenhouse gas emissions reporting. Our greenhouse gas emissions management also complies with the requirements of the Commission Regulation (EU) No 601/2012. Example: if for any reason Atlantica failed to comply with all the environmental and climate-related regulation in place, it would face fines and penalties. Nevertheless, we also believe that more stringent regulation on emissions and environment will represent an opportunity for us, since we focus on technologies that avoid emissions.
Emerging regulation	Relevant, always included	Risks related to emerging regulation are always considered in our risk management system. Emerging regulation could have a negative impact on Atlantica's growth or cause an increase in costs. Renewable energy projects currently benefit from various U.S. federal, state and local governmental incentives. These policies have had a significant impact on the development of renewable energy and they could change. These incentives make the development of renewable energy projects more competitive by providing tax credits, accelerated depreciation and expensing for a portion of the development costs. This allows to decrease the costs associated with developing such projects or create demand for renewable energy assets through RPS programs. A reduction in such incentives could decrease the attractiveness of renewable energy projects to developers, and the attractiveness of solar energy systems to utilities, retailers and customers. Nevertheless, we believe that the cost of the technologies we use will continue decreasing and will make them fully competitive without any support versus conventional generation sources. Example: if the current environmental and tax policies in the United States create

		regulatory uncertainty in the clean energy sector and lead to a reduction of various clean energy programs and initiatives designed to curtail climate change. Such a reduction or removal of incentives would diminish the market for future renewable energy offtake agreements and reduce the ability for renewable developers to compete limiting growth. In addition, there is a high degree of uncertainty over the continuation of the Kyoto Protocol which could reduce capital investments in climate change mitigation projects in developing countries. The withdrawal of the United States from the Paris Agreement added to that uncertainty. A change in policies or reduction in incentives could slow the development of renewable assets and reduce our acquisition opportunities. Nevertheless, we believe that overall new regulation will tend to foster renewable clean generation and that we should benefit from that.
Technology	Relevant, always included	Investment in new technologies and/or the potential impacts of our existing technology becoming less efficient than new technologies are always considered in our risk assessment. Nevertheless, all the assets we own are contracted or regulated over a long period of time, 18 years as of December 2018, making this risk very small for us. Our clients need to comply with existing contracts. Regarding new projects we can work with any technology and we therefore plan to run the most competitive technology at any point in time.
Legal	Relevant, always included	Atlantica considers that legal aspects are a relevant risk and accounts for it in the risk matrix. If we did not comply with the existing environmental and climate-related regulation in place and to be adopted in upcoming years, we could be subject to fines, penalties, legal claims and proceedings, requests for arbitration as well as regulatory enforcement actions. Example: We comply with water regulation in all the areas where we operate and we have limits for water consumption. Although today we consumme less than half of the water we are alowed to, if these limits were to be reduced, our operating costs would increase as a result of increased needs of chemical products to purify water.
Market	Relevant, always included	Global trends in the market due to climate change can affect Atlantica and as such they are always included in our risk management system. Nevertheless, thanks to the fact that our portfolio is contracted over 18 years the risk on our existing portfolio is very low. Regarding new projects, higher demand for renewable has created an increase in competition and drop in the cost of renewable generation. In some markets, it is becoming more difficult to find power purchase agreements: the length of the new contracts is decreasing, and the prices are becoming lower. This may cause over a long period of time

		a change in our portfolio of long-term contracted assets. The power generation industry is facing intense competition and our electric generation assets have to compete with utilities, industrial companies, other independent power producers and distributed solar sector. In light of these market conditions, we may not be able to replace in the long term an expiring agreement with an agreement on equivalent terms and conditions, including at prices that permit operation of the related facility on a profitable basis.
Reputation	Relevant, always included	Reputation is key for our business in order to maintain a good relationship with all our stakeholders, including clients, suppliers, banks, investors and other partners. Reputational risk is always included in our risk assessment. Atlantica considers that maintaining a good reputation is a relevant risk and accounts for it in the risk matrix. There is a shift in the global society towards sustainability and sustainable way of doing business. We believe that maintaining a good reputation affects many aspects of the company. ESG criteria is becoming an important element in investment decision. As a yield oriented company, Atlantica distributes as dividend most of the cash it generates. Growth initiatives over time will require us to access the capital markets, issuing either debt or equity. Access to capital is an important part of our growth strategy and our plan of acquisitions. If our reputation worsened, access to capital may become more difficult. An example of a reputation risk in Atlantica: While a significant part of our business portfolio consists of renewable assets, we also own assets that can be considered less environmentally friendly, currently consisting of only one asset, our 300 MW cogeneration plant in Mexico which uses natural gas. We intend to grow our portfolio maintaining at least an 80% of clean assets, including renewable assets, transmission lines and desalination plants. However, as long as we maintain this proportion, we could also acquire efficient natural gas assets which can have a negative reputational impact on Atlantica as a renewable energy company.
Acute physical	Relevant, always included	Atlantica's business consists of operating sustainable infrastructures. Hence , physical risk which may affect those infrastructures is critical and is always considered in our risk management process. Climate change is causing an increasing number of severe and extreme weather events which are a risk to our facilities, including days of extremely high temperatures, severe winds and rains, hurricanes, cyclones, droughts, risk of fires and floods, among others. For example, our solar assets in the US are located in the Mojave Desert in California and 90 miles Southwest from Phoenix, two locations with high temperatures. Any of those extreme weather events could cause damage to our assets and/or business interruptions.

Chronic physical	Relevant, always included	Physical risk which may affect our sustainable infrastructure is critical and is always considered in our risk management process. Continuing shifts in climate have turned into a chronic problem and are driving up current and future costs, putting new strains on long-term investments and economic growth. The Intergovernmental Panel on Climate Change confirms that the scientific evidence for warming of the climate system is unequivocal. NASA states that the current significant warming trend (increase to 400 parts per million (ppm) of CO2 compared to 300 ppm in 1950 and average of approximately 240 ppm prior to 1950) is, 95% probability, a result of human activity since the mid-20th century and proceeding at a rate unprecedented over decades to millennia. The evidence of the rapid change is supported by global temperature rise, warming oceans, shrinking ice sheets, glacial retreat, decreased snow cover, sea level rise, declining arctic sea ice, extreme events and ocean acidification. For example, one of the chronic effects of climate change is a change in precipitation patterns. A reduction in mean precipitation may lead to reduction in available water from aquifers and could also modify main water properties. Water is used mainly in our generation facilities for cooling and cleaning through a technology that minimizes the use of water. A reduction of mean precipitations may result in a reduction of availability of water from aquifers and could also modify main water properties. These changes would have an impact on operational costs due to the increase of the use of certain chemicals to adapt water properties to the ones required in our water treatment plants. An increase of 10% in the consumption of chemicals in our generation facilities would have an estimated yearly impact on operational costs of approximately $0.8 million.
Upstream	Relevant, always included	Atlantica considers that upstream is a relevant risk and accounts for it in the risk matrix. Our upstream operational risks may be expressed as a risk arising from problems with the suppliers and third-party contractors. Our assets rely on the supply of services, equipment, design, including technologically complex equipment and software which we subcontract to our operation and maintenance providers or other third-party suppliers Our suppliers may be affected by changes in environmental regulation, extreme weather conditions, natural disasters arising from the climate change and global warming. These conditions may make it difficult for our suppliers to facilitate the timely replacement of damaged equipment, which can cause our plants to curtail or cease operations during such time.
Downstream	Relevant, always included	Atlantica considers Downstream to be relevant and always includes this risk in the risk matrix. Utilities are heavily regulated and subject to certain environmental and climate-related risks, including heavy

		regulation and acute physical risks. For example, one of our off-takers is PG&E, a large utility in California which filed for bankruptcy protection under Chapter 11 due to large liabilities caused by its potential involvement in wildfires in California in 2017 and 2018. The U.S. National Climate Assessment report released in 2013 discussed the increasing risk of fires in California, indicating that numerous fire models project more wildfires as climate change continues, with up to 74 percent more fires in the region. According to this report, rising temperatures and droughts are increasing the frequency and intensity of fires in California. Although PG&E continues to pay under the existing contract, a chapter 11 in one of our clients creates a potential credit risk.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Atlantica employs a risk map which adopts a multidisciplinary approach for identifying risks in different areas, assigning probability distributions and measuring economic impact in order to **propose action plans to mitigate and manage the risks identified**. The risk map contains a questionnaire regarding risk indicators and economic impact. Risk management is part of the overall process detailed above.

Once a risk has been identified, management responsability will be assigned depending on its nature, likelihood and potential financial impact. In general, our VPS, Asset Managers, Operations and Environment will play a very active role in managing risks related to our assets. Potential decisions to manage risks may be:
- Mitigation when possible
- Transfer through insurance policies
- Internal management where appropriate

Environmental Management is an integral part of our planning, maintenance and operation of our assets. Our Environmental System holds certification under ISO 14001 standard. Our integrated management system guarantees that we comply with the regulations in force and with our policies, in each of the markets we operate. We measure the environmental impact of our activities, monitoring, identifying and implementing action plans to reduce that impact at each of our assets. Atlantica has defined the requirements to be fulfilled by the operation and maintenance supplier of each of our concessional assets, in order to allow an optimal control and management:
- environmental audits
- environmental inspections
- monitoring of environmental permit, authorizations, licenses and applicable regulatory conditions
- Implementing best environmental practices

In addition, we have decided to maintain an 80% of our portfolio in clean energy and low carbon assets and intend to reduce our GHG emissions by 10% by 2030. We have a process in

place to assess all risks related to potential investments and acquisitions, including climate related risks. As a result, climate risks are included in the overall assessment of potential investments. We also consider how a potential investment and acquisition will impact our reduction emissions and revenue-mix targets.

Regarding opportunities, our Corporate Development department is in charge of identifying growth opportunities in the sectors and geographies where we operate or that we target. Local teams in each geography where we operate are also in charge of identifying opportunities.

Example of climate related physical risk management:
Over the last few years we have seen events of extreme wind. In 2016, in our Solana solar asset the solar field was damaged after a severe wind event and the plant operated at a reduced capacity for several weeks. Damage and business interruption was covered by insurance after customary deductibles. As a result of this event we have improved our wind management procedures including
1) development of new automated wind triggers based on local weather forecasting and
2) Modification of the stow position and the control logic in order to reduce stow times

Example of climate related transitional risk:
Climate change is causing an increase in environmental regulation in the sectors where we operate. For example, in the United States, our 2 solar plants with a total capacity of 560 MW are subject to the permits under the Clean Air Act, Clean Water Act as well as requirements under the biological conditions, noise ordinance and storm water control regulations. To mitigate the risk at each of the assets, we have designated teams that monitor operations at the plant, conduct prevention activities and manage and react quickly to any environmental incident under the plans of emergency rehearsed at the facilities. The equipment is subject to preventive and corrective maintenance to avoid any environmental spills and abnormal emissions into the atmosphere. Considering the control systems and processes in place, we estimate that the risk of violations resulting in fines to be manageable, but we need to maintain our high control standards to keep this potential risk under control. The cost of management is an estimation of all internal and outsourced costs required by our compliance activities in each geography and at the corporate level.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact

Increased costs and/or reduced demand for products and services resulting from fines and judgments

Company- specific description

Atlantica is directly affected by the environmental regulation on power generating assets, desalination assets and electric transmission lines. This includes climate-related risks driven by laws, regulation, taxation, disclosure of emissions and other practices. Environmental regulation, among other things, requires us to obtain and maintain regulatory licenses, permits and other approvals and comply with the requirements of such licenses and permits. For example, in the United States, our 2 solar plants with a total capacity of 560 MW are subject to the permits under the Clean Air Act, Clean Water Act as well as requirements under the biological conditions, noise ordinance and storm water control regulations. In addition, as a United Kingdom company, Atlantica is subject to, and is in compliance with, the requirements of the Climate Change Act 2008 for greenhouse gas emissions reporting. Our greenhouse gas emissions management also complies with the requirements of the Commission Regulation (EU) No 601/2012. If for any reason Atlantica failed to comply with all the environmental and climate-related regulation in place, it would face fines and penalties. If regulation became stricter in the future, we may be required to increase our compliance costs. Nevertheless, we believe that more stringent regulation on emissions and environment will help our business as we focus on technologies that avoid emissions including renewable energy.

Time horizon

Current

Likelihood

Unlikely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

2,000,000

Explanation of financial impact figure

Potential fines and sanctions are different by geography and depend on many different variables. As a reference we show the potential maximum fine we can get in one of our 50MW solar assets in Spain. In the United States, maximum penalties are in the range of $1000 per day. In addition to potential fines, a situation of non compliance can have significant negative consequences which in serious situation could cause an event of default under the project finance agreement or the requirement to stop production.

Management method

We have a strong compliance system in place. Our Compliance Committee has designated employees in charge of compliance in each geography. Compliance risks and matters are closely monitored at the asset level and at the corporate level. To mitigate the risk we periodically and systematically review risks at various internal working groups and management committees. At each of the assets, we have designated teams that monitor operations at the plant, conduct prevention activities and manage and react quickly to any environmental incident under the plans of emergency rehearsed at the facilities. The equipment is subject to preventive and corrective maintenance to avoid any environmental spills and abnormal emissions into the atmosphere. Considering the control systems and processes in place, we estimate that the risk of violations resulting in fines to be manageable, but we need to maintain our high control standards to keep this potential risk under control. The cost of management is an estimation of all internal and outsourced costs required by our compliance activities in each geography and at the corporate level.

Cost of management

5,000,000

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Rising mean temperatures

Type of financial impact

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description

According to an ongoing temperature analysis conducted by scientists at NASA's Goddard Institute for Space Studies, the average global temperature on Earth has increased by about 0.8° Celsius since 1880. Two-thirds of the warming has occurred since 1975, at a rate of roughly 0.15-0.20°C per decade. We consider that the main impact of rising temperatures would be associated to the reduction of the cycle efficiency of our turbines, which is partially offset by the lower thermal losses in our solar assets. A 1ºC temperature rise could cause yearly losses between 0.04% and 0.21% depending on cooling technology, turbine specifications and site meteorological conditions. The associated financial impact of this potential temperature rise would be approximately $0.3 million per year in revenues, if no additional measures were taken. Regarding photovoltaic plants, module efficiency is reduced above a certain temperature threshold. When the temperature of the solar panel increases, its output slightly increases while the voltage output is reduced linearly, therefore panel power decreases. A 1ºC temperature rise would imply a module efficiency reduction of 0.39%. The associated financial impact of this measure would be approximately 50 thousand dollars in revenues. A mean temperature rise would also have an impact in our wind facilities. Wind energy is dependent on the air density among other factors. A 1ºC temperature rise would imply a reduction on the air density of 0.34% and a reduction of yearly wind generation of approximately 1.2 GWh. The associated financial impact of this measure would be approximately $0.1 million in revenues. Our desalination plants could also be affected by a temperature increase that would imply higher consumption of chemicals used for operational purposes. A 1% increase of chemical consumption would imply extra yearly costs of approximately $0.1 million.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

500,000

Explanation of financial impact figure

If no additional measures were implemented a 1ºC temperature rise could cause an associated financial impact of 0.5 million dollars.

Management method

Our Operations Department is constantly working in improving efficiency in our assets and applying best practices. Our Operations Department monitors closely the performance of each of our assets to try to identify any potential measure which could improve efficiency.

Cost of management

0

Comment

The cost is part of our structural overhead expenses.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

Type of financial impact

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description

Water is used mainly in our generation facilities for cooling and in our solar assets for cleaning through a technology that minimizes the use of water. A reduction of mean precipitations may result in a reduction of availability of water from aquifers and could also modify main water properties. These changes would have an impact on operational costs due to the increase of the use of certain chemicals to adapt water properties to the ones required in our water treatment plants. An increase of 10% in the consumption of chemicals in our generation facilities would have an estimated yearly impact on operational costs of approximately $0.8 million.

We control water quality and we constantly try to monitor and improve the efficiency of our water treatment plants within our entire fleet of assets.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
700,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure
It is difficult to assess what could be the change in precipitation patterns and as a result to estimate what the increase in operating costs may be. In our case, an increase of 10% in the consumption of chemicals in our main generation plants would have a yearly impact on operational costs of $0.7 million.

Management method
We control water quality and we constantly try to monitor and improve the efficiency of our water treatment plants within our entire fleet of assets. This management is performed by our personnel at the asset level and by our centralized Operations Department, it is part of our structure costs. As an example of initiatives to reduce water consumption, we have implemented an air-dry cooling system, instead of cooling towers, to refrigerate the condensers in one of our generation plants. This plant is located in an area with water scarcity problems and this system reduces the water demand.

Cost of management
0

Comment

Identifier
Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact

Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)

Company- specific description

Climate change is causing increasing number of severe and extreme weather events which are a risk to our facilities, including days of extremely high temperatures, severe winds and rains, hurricanes, cyclones, droughts, risk of fires and floods, among others. Our solar assets in the U.S. are located in the Mojave Desert in California and 90 miles Southwest of Phoenix, two locations with high temperatures in the summer. Our assets were designed and built by third parties complying with technical codes, local regulations and environmental impact studies. Technical codes should consider extreme weather events based on historical information and should include design safety margins. However, an increased severity of extreme weather events such as floods could have an impact on our assets. Severe floods could have an impact on our transmission lines or our generation assets. If an unexpected flood runs close to one of our transmission lines it could cause the fall of one or several transmission towers. Severe winds could cause damage on the solar fields in our solar assets. Severe droughts could result in water restrictions or in a deterioration of water properties. Severe droughts can also increase the risk of fire and cause more frequent and intense fires. If our transmission assets caused a fire, we may be found liable for the damage caused by that fire. Changes in temperature extremes could also affect feed water process temperature in desalination plants, causing an increase in the chemical products consumption and generating other risks within the facilities.

Time horizon

Current

Likelihood

Unlikely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

600,000

Potential financial impact figure – maximum (currency)

500,000,000

Explanation of financial impact figure

There is a wide range of acute physical events which could affect our assets and difficult to assess the economic financial impact this may have. If we evaluate a potential loss of production caused by an acute physical event, for example, having one of our solar assets producing for one month at an availability level of 60% could result in average in a loss of revenue of approximately $3.1 million per solar asset(with significant differences between each asset). The same circumstance would result in a average loss of revenue of approximately $0.6 million per wind asset and $1.1 million per transmission line. To give an idea of a worse case scenario, if we consider the accounting book value of one of our largest assets, net of debt, and before considering any insurance recovery, the amount of accounting loss could be up to approximately $500 million.

Management method

Our personnel at the asset level and our Operations Department monitor constantly and on real time weather conditions in each of the assets to take the required protection measures if necessary. As a result of a weather event in the past, we applied our risk management process and decided to review our wind management procedures, including:
1) development of new automated wind trigger based on local weather forecasting and
2) Modification of the stow position and the control logic in order to reduce stow times
Cost management is calculated as the cost of all insurance, and all interal costs of asset level and corporate level in charge of monitoring those type of events, including insurance department and all the people in charge of managing acute physical risks in the organization.

Cost of management

25,000,000

Comment

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Rising sea levels

Type of financial impact

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description

According to a NASA study published in 2018 and based on 25 years of NASA and European satellite data. The rate of global sea level rise has been accelerating in recent decades, rather than increasing steadily. This acceleration, driven mainly by increased melting in Greenland and Antarctica, has the potential to double the total sea level rise projected by 2100 when compared to projections that assume a constant rate of sea level rise, according to lead author Steve Nerem. If the rate of ocean rise continues to change at this pace, sea level will rise 26 inches (65 centimeters) by 2100.
Atlantica's seawater desalination plants could be affected by this risk, due to the fact that they are located on the seaside. The sea level rise could require implementing protection measures to prevent floods. In our case, if sea level raises as expected, and if we consider a remaining life of these facilities of 17 years, the sea level would raise by between 3 cm and y 10 cm (1.3 to 3.9 inches) during the useful life of these assets. Both facilities were built at a relative sea level height of between 3 and 8 meters (9.8 to 26.2 feet). If sea level does not rise much more than expected, we do not expect any impact on the operations of these assets during their expected lifetime.
We believe that our desalination plants are located at a safe distance from the sea considering their useful lives and the forecasts on sea level rise, however we monitor the sea level periodically in these assets.

Time horizon

Long-term

Likelihood

Exceptionally unlikely

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

64,000,000

Explanation of financial impact figure

Our base case scenario is that we are not going to have any financial impact because the probability of occurrence is extremely unlikely. Since it is very difficult to estimate a potential financial impact, as a reference, the total accounting book value of our desalination plants, net of debt and net of non-controlling interest is approximately $64million.

Management method

The only assets that may be affected by a rise of sea levels are our desalination plants, to mitigate this risk we locate them in a safe distance from the sea considering their useful lifes and the forecasts on sea level rise, however we monitor the sea level periodiccally in our assets. This management is performed by our personnel at the asset level and by our centralized Operations Department, it is part of our structure costs.

Cost of management

0

Comment

Identifier

Risk 6

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Reputation: Increased stakeholder concern or negative stakeholder feedback

Type of financial impact

Reduction in capital availability

Company- specific description

There is a shift in the global society towards sustainability and a sustainable way of doing business. More and more consumers are demanding products and services which are respectful with the environment and in particular which do not worsen climate change. Investors are also demanding investment products which comply with ESG criteria, including environment and climate change. While a significant part of our business portfolio consists of renewable assets, we also own assets that can be considered less environmentally friendly, currently consisting of only one asset, our 300 MW cogeneration plant in Mexico which uses natural gas. We intend to grow our portfolio maintaining at least an 80% of clean assets, including renewable assets, transmission lines and water plants. However, as long as we maintain this proportion, we could also acquire efficient natural gas assets, which could have a negative reputational impact on Atlantica as a renewable energy company. Additionally, ESG

criteria are becoming an important element in investment decisions. Over time, growth initiatives will require to access the capital markets, issuing either debt or equity. Acces to capital is a vital part of our growth strategy and our plan of acquisitions. If our reputation as a renewable and green company worsened, access to capital may become more difficult.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

1,000,000

Explanation of financial impact figure

It is extremely difficult to calculate a reputational cost and the cost of having access to a lower number of investors. In order to give a reference, different studies show that companies with a low ESG rating have a higher cost of capital than companies with a high rating. That difference can be up to 300 pbs, according to those sources. Our gross corporate debt amounted to approximately $700 million as of March 31, 2019 and had an average cost of approximately 4.8%, resulting in an annual cost of approximately $34 million. If this cost increased by 1 to 3%, it could result in an annual impact up to $1 million.

Management method

We have increased our disclosure efforts to have a good ESG rating. For example, Atlantica was rated by Sustainalytics in December 2018 on its Environment, Social and Governance factors as the top company within renewables, second within the broader utilities sector and in the top 3% in the global ratings universe. We are a participant in the UNGC. In June 2019, we obtained our first ESG-linked financial guarantee line, which will be exclusively used for renewable assets. Additionally, we intend to grow our portfolio maintaining at least an 80% of clean assets, including renewable assets, transmission lines and water plants. This management is performed by our personnel at the Investor Relations Department and our Operations Quality and Environment department, it is part of our structure costs.

Cost of management

0

Comment

Identifier

Risk 7

Where in the value chain does the risk driver occur?

Customer

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Rising mean temperatures

Type of financial impact

Increased credit risk (e.g., increased probability of default and/or loss given default)

Company- specific description

Some of our clients are large utilities, which are also exposed to significant climate-change related risks. Utilities, which are companies heavily regulated and subject to certain environmental and climate-related risks, including heavy regulation and acute physical risks.

For example, one of our off-takers is PG&E, a large utility in California which filed for bankruptcy protection under Chapter 11 due to large liabilities caused by its potential involvement in wildfires in California in 2017 and 2018. The U.S. National Climate Assessment report released in 2013 discussed the increasing risk of fires in California, indicating that numerous fire models project more wildfires as climate change continues, with up to 74 percent more fires in the region. According to this report, rising temperatures and droughts are increasing the frequency and intensity of fires in California. PG&E is the offtaker in our asset located in Mojave's Desert in California.

Time horizon

Current

Likelihood

Unlikely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

560,000,000

Explanation of financial impact figure

Our base case scenario is that we are not going to have any financial impact. PG&E is currently paying its invoices. If PG&E's chapter 11 did not develop as expected and our PPA was rejected or terminated, we would have an unsecured claim in the bankruptcy process. However, a chapter 11 is a complex process and there is uncertainty. It is extremely difficult to give an estimation of a potential financial impact. As a reference, the accounting book value of the Mojave asset net of debt amounts to approximately $560 million. This is solely an accounting amount, before considering any recovery of the claim that we would have in the chapter 11 under that situation.

Management method

When we evaluate potential acquisitions, our risk management process evaluates all the risks potentially affecting the investment, including climate related risks affecting the asset and its offtaker. Management is part of the costs in our structure.

Cost of management

0

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

According to Bloomberg 2018, global power demand is expected to grow 57% between 2018 and 2050, or 1.4% annually.At the same time,renewable energy cost continued decreasing, already offering lower cost solutions than new large-scale coal and gas plants in many markets.By 2050, renewable energy is expected to supply up to 87% of electricity needs in Europe and 55% in the United States.According to Bloomberg,$11.5 trillion is expected to be invested in new power generation assets until 2050,of which 86% is expected to go to zero-emissions technologies and 73%, or $8.4 trillion, to wind and solar.This could represent around $255 billion per year.By 2030,there may be more than twice the renewable capacity for every dollar spent compared to today. By 2050, the amount could double again, such that a dollar invested buys four times the renewables capacity it does today. The levelized cost of an average PV plant is expected to fall by 71% by 2050 due to the ongoing cost declines in solar technology. Module costs are down 84% since 2010 and are expected to decrease another 52% from today to 2025 as manufacturers find further efficiencies throughout the production chain. Subsidies and government support are no longer necessary for renewables to be competitive.Battery storage is becoming a competitive reality.Wind and solar are already cheaper than coal, nuclear and gas, as a result growth is going to be immense, either through power purchase agreements, financial hedges or competition in the open market.The opportunity for Atlantica is huge.We believe renewable energy will represent in most markets the majority of new investments in the power sector.In order to make this transition in the power mix,every region will need to complement investments in renewable energy with investments in efficient natural gas,in transmission networks and in storage.We believe that we are positioned in the right sectors to benefit from the transition towards a more sustainable power mix that is happening worldwide.In addition, water is going to be the next frontier in a transition towards a more sustainable world.Vast regions worldwide need new sources of water and water desalination and water transportation infrastructure should help to make that possible.We are also present in water through water desalination and intend to play an active role in the water development which is underway.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

300,000,000

Potential financial impact figure – maximum (currency)

600,000,000

Explanation of financial impact figure

Atlantica has a target to grow its dividend per share in a range of 8% to 10% by 2022. To reach this goal, we intend to invest approximately $200m-$300m in equity value per year with a large majority in renewable energy depending on different assumptions (including amount of project debt, EV/EBITDA, etc) this would represent 300 to 600 million dollars over a period of five years.

Strategy to realize opportunity

We believe we can achieve organic growth through the optimization of the existing portfolio,price escalation factors in many of our assets and the expansion of current assets, particularly our transmission lines, to which new assets can be connected.We currently own three transmission lines in Peru and four in Chile.We believe that current regulations in Peru and Chile provide a growth opportunity by expanding transmission lines to connect new clients.Additionally,we should have repowering opportunities in certain existing generation assets once their contracted life has expired. We have in place an exclusive ROFO agreement with AAGES to develop and invest renewable energy and water assets.The AAGES ROFO Agreement and Algonquin provides us with a right of first offer on any proposed sale of assets AAGES does.

We plan to sign similar agreements or enter into partnerships with other developers or asset owners to acquire assets in operation.We may also invest directly or through investment vehicles with partners in assets under development or construction,ensuring that such investments are always a small part of our total investments.

Finally,we also expect to acquire assets from third parties leveraging the local presence and network we have in the geographies and sectors in which we operate. We estimate as a 1% of our investments in terms of equity value the cost required to realize this opportunity. This includes our internal costs and costs to finance these acquisitions.

Cost to realize opportunity

2,500,000

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Other

Type of financial impact

Other, please specify

Access to capital markets

Company-specific description

We believe stakeholders prefer sustainable products and services such as low carbon and renewable energy rather than non-renewable energy. There is an increasing number of governments, private companies and investors publicly stating their commitment to support environment through their business decisions. We see more and more investors who have incorporated sustainability into their investment decision process. Certain investors have developed ESG specific funds, in which Atlantica fits perfectly. Atlantica relies on debt and equity capital markets to fund its growth strategy. Having access to a larger number of investors is key for our business development. In addition, we see the opportunity of expanding sources of financing to financial products available through green financing (green bonds, green loans, etc.). Climate finance is a growing sector in international and environmental finance. Governments and private money are continually making more resources available to climate finance and have committed to raise $100 bn per year by 2020 under the Paris Agreement. Access to green financing will help us to expand our options in pursuit of our growth strategy.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

0

Potential financial impact figure – maximum (currency)

1,000,000

Explanation of financial impact figure

It is extremely difficult to calculate the impact of the opportunity to have a better access to capital. In order to give a reference, different studies show that companies with a low ESG rating have a higher cost of capital than companies with a high rating. That

difference can be up to 3%, according to those sources. Our gross corporate debt amounted to approximately $700 million as of March 31, 2019 and had an average cost of approximately 4.8%, resulting in an annual cost of approximately $34 million. If this cost increased by 1 to 3%, it could result in an annual impact up to $1 million.

Strategy to realize opportunity

We have improved and intend to continue improving our sustainability related reporting and disclosure during 2017. In June 2018, we issued our first Sustainability Report for 2017 with data for the three consecutive periods of 2015-2017. We also added a sustainability related section athe the company website www.atlanticayield.com. Several sustainability related data providers (Bloomberg ESG, Sustainalytics, etc) have increased their assessment of Atlantica as a result of our improved reporting. We are continuing to work to increase our exposure and perception by these agencies to secure green financing. In addition, In 2019 we closed our first green guarantee line. The cost is linked to Atlantica's environmental, social and governance performance under a leading sustainable rating agency (Sustainalytics). The green guarantees will be exclusively used for renewable assets. The costs are included in our recurring general and administrative expenses and correspond basiccally to the costs of our ESG department.

Cost to realize opportunity

0

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Other

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

At Atlantica we believe transmission lines have a central role in energy transition. Renewable energy is going to represent the majority of new power generation in the short and mid-term. However, in the short and mid term large investments will be required in new "smarter" transmission and distribution networks that can support renewable generation over the mid-term. We currently own three transmission lines in Peru and four in Chile, as well as a minority interest in a transmission line under construction in the United States. We believe that current regulations in Peru and Chile

provide a growth opportunity by expanding transmission lines to connect new clients. For example, we can get contacted by potential customers building renewable assets who need a connection to the grid. We recently did a first expansion to our ATN transmission line, we invested $16 million dollars. We believe we can achieve organic growth through similar opportunities.

Time horizon

Current

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

25,000,000

Potential financial impact figure – maximum (currency)

150,000,000

Explanation of financial impact figure

We estimate that we can do expansions of our transmission lines investing in the range of $15 to $25 million per year. This investment could translate in an increase in our revenues in the range of $5 to $10 million per year. This can represent $25 to $50 million over the next five years. Additionally, we expect to have opportunities to invest in new transmission lines. If for example, we were able to invest externally twice what we expect to invest through expansion, that could represent up to $150 million in additional revenues over five years.

Strategy to realize opportunity

Our local teams work closely with our Corporate Development team to identify this type of opportunities. The cost to realize this opportunity is part of our current structure, we do not need an additional investment to realize the opportunity.

Cost to realize opportunity

0

Comment

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted	This is an impact from Opportunity 1 "Development and/or expansion of low emission goods and services" . We believe that we are positioned in the right sectors to benefit from the transition towards a more sustainable power mix that is happening worldwide. In addition, vast regions worldwide need new sources of water desalination and water transportation infrastructure should help to make that possible. We intend to benefit from this opportunity by growing through several sources, all of them with a clear focus on clean energy and water infrastructure assets. Most of our business consists of low carbon footprint assets. In 2018, 87% of our revenue was from low carbon footprint assets. In addition, we supplied purified sea water for 2 million people. In November 2018 we announced the expansion of one of our transmission lines in Peru and the acquisition of a transmission line in Chile. In December 2018, we announced the acquisition of a 50MW wind plant in Uruguay and the co-investment of another wind asset in the US. In addition, in January 2019 we reached an agreement for the acquisition of a desalination plant. We believe the magnitude of the impact is high and the probability of this opportunity to happpen is very likely.
Supply chain and/or value chain	Impacted	This is an impact from Risk 7 " Rising mean temperatures", our suppliers and customers are impacted by climate change in similar ways than we are. Potential weather adverse effects of climate change in their operations could negatively impact our own operations. Our suppliers and customers may be affected by changes in environmental regulation, extreme weather conditions, natural disasters arising from the climate change and global warming. Some of the off-takers of our long-term contracts are utilities, which are companies heavily regulated and subject to certain environmental and climate-related risks, including heavy regulation and acute physical risks. Example: In January 2019, PG&E, a large utility in California, filed for bankrupty protection under Chapter 11 due to large liabilities caused by its potential involvement in wildfires in California in 2017 and 2018. For several weeks, our share price was negatively impacted by the situation at PG&E and the potential credit risk it may cause. We believe the magnitude of the impact is high and the probability of this risk to happpen is unlikely.
Adaptation and mitigation activities	Impacted	This is an impact from Risk 1 " Policy and Legal: Mandates on regulation of existing products and services". Atlantica benefits from the transition towards a more sustainable energy sector. We were born as a sustainable infrastructure company, and we intend to focus on clean energy and water infrastructure. Nevertheless, climate change has created the need of more environmental regulation. As to be able to comply with the new regulation we have developed a risk management control that takes into account compliance with regulation in all the

		countries where we a operate. Our Corporate Operations and Risk Management Departments monitor, oversee and coordinate personnel at the asset level in charge of compliance and environment. Furthermore, due to climate change, companies are asked to issue more GHG reportings. Atlantica has developed an internal system to gather and analyze GHG information. We have set GHG targets and intend to expand these targets to certain resource consumption, such as water. Example: An example of managing environmental risks related to our GHG emissions, we have performed energy efficiency audits in some of our assets. These audits have resulted in recommendations to reduce our electricity consumption and therefore our scope 2 emissions. We are defining a plan to implement these recommendations and to perform these audits in the rest of the main assets. We are also working with a third party to identify measures which could be reduce emissions in our efficient natural gas plant. We believe the magnitude of the impact is medium-low and the probability of this risk to happpen is unlikely.
Investment in R&D	Not yet impacted	Investment in R&D is not a core activity for Atlantica at this stage. However we do invest resources to ensure that we use best in class innovative technology in areas including predictive maintenance in our assets, which takes into account climate-related risks and opportunities. We do not expect any financial impact in the next two years.
Operations	Impacted	This is an impact from risks 2"Rising mean temperatures", 3"Changes in precipitation patterns and extreme variability in weather patterns",4 "Increased severity of extreme weather events such as cyclones and floods",6 "Rising sea levels" Our local teams at the asset level, our corporate Operations teams and our Risk management team monitor closely all risks related to climate change including risks arising from an increase in mean temperature, increase in risks of severe weather events, decrease in mean precipitations or increase in sea level, among others.Since we are an infrastructure company managing large assets, we pay special attention to extreme weather events risks, which could damage our assets.Our teams, both at the asset level and at the corporate level, monitor potential adverse impacts to control and manage risks.Example:Over the last few years we have seen events of extreme wind. In 2016, in our Solana solar asset the solar field was damaged after a severe wind event and the plant operated at a reduced capacity for several weeks. Damage and business interruption was covered by insurance after customary deductibles. As a result of this event we have improved our wind management procedures including 1) development of new automated wind trigger based on local weather forecasting and 2) Modification of the stow position and the control logic in order to reduce stow times. We believe the magnitude of the impact of risk 2"Rising mean temperatures" is low and that the probability of this risk to happen is

		likely. The magnitude of the impact 3"Changes in precipitation patterns and extreme variability in weather patterns" is medium-low and the probability of this to happen is more likely than not. Regarding risk 4 "Increased severity of extreme weather events such as cyclones and floods" we believe that the magnitude of the impact is high but the probability of this risk to happen is unlikely. Lastly, we consider the magnitude of the impact from risk 6 "Rising sea levels" to be low and the probability of this risk to happen is about as likely as not.
Other, please specify		

C2.6

(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.

	Relevance	Description
Revenues	Impacted	Increase in Revenues thanks to our growth opportunities in renewable and low carbon footprint assets described in Opportunity 1 " Development and/or expansion of low emissions goods and services". In 2018, almost 90% of our business was in low carbon footprint assets, including renewable energy, transmission lines, efficient natural gas energy storage and water. Renewable energy represented a 76% of our revenues, $793.5 million. We plan to grow our business maintaining an 80% of our portfolio in low carbon assets. In order to meet our growth targets, we intend to invest approximately $200 to $300 million per year in acquisitions, in terms of equity value. This could result in an increase in revenues in the range of approximately $400 million to $1,100 million in the upcoming 5 years. We believe renewable energy will represent in most markets the majority of new investments in the power sector.In order to make this transition in the power mix,every region will need to complement investments in renewable energy with investments in efficient natural gas,in transmission networks and in storage.We believe that we are positioned in the right sectors to benefit from the transition towards a more sustainable power mix that is happening worldwide.In addition, water is going to be the next frontier in a transition towards a more sustainable world.Vast regions worldwide need new sources of water and water desalination and water transportation infrastructure should help to make that possible.We are also present in water through water desalination and intend to play an active role in the water development which is underway. We believe the magnitude of the impact is high and the probability of this opportunity to happpen is very likely.
Operating costs	Impacted	Operating costs may increase as a result of most of the risks previously described.

		Operating costs may increase as a result of potential climate-related risks, such as severe weather events (Severe floods could impact our transmission lines and generation assets, severe winds could cause damage on the solar fields and severe droughts could cause water restriction), increase in mean temperatures (this could affect our desalination plants by having to use more chemicals for operational purposes, and it can also reduce wind generation) or reduction in precipitation (it may affect the availability of water from aquifers and could also modify main water properties) among others. Operating costs may also increase as a result of additional requirements to comply with environmental regulation or GHG reporting. We may also need to increase our internal systems to control climate related risks. All these potential events are taken into account when analysing our financial planning process. The impact of operating costs is a negative impact meaning a probable increase of costs in which will reduce our EBITDA. 2"Rising mean temperatures" is low and that the probability of this risk to happen is likely. The magnitude of the impact 3"Changes in precipitation patterns and extreme variability in weather patterns" is medium-low and the probability of this to happen is more likely than not. Regarding risk 4 "Increased severity of extreme weather events such as cyclones and floods" we believe that the magnitude of the impact is high but the probability of this risk to happen is unlikely. Lastly, we consider the magnitude of the impact from risk 6 "Rising sea levels" to be low and the probability of this risk to happen is about as likely as not.
Capital expenditures / capital allocation	Not yet impacted	Atlantica is a sustainable infrastructure company with the majority of its activities in renewable energy. Therefore, the majority of our investments will be in new assets. Maintenance capex in our assets is not significant compared to investments in new assets and acquisitions. We refer to the following section.
Acquisitions and divestments	Impacted	We expect that Opportunity 1 "Development and/or expansion of low emission goods and services" will represent a significant source of acquisitions and investment growth for Atlantica. According to Bloomberg 2018, global power demand is expected to grow 57% between 2018 and 2050, or 1.4% annually.At the same time,renewable energy cost continued decreasing, already offering lower cost solutions than new large-scale coal and gas plants in many markets.By 2050, renewable energy is expected to supply up to 87% of electricity needs in Europe and 55% in the United States.According to Bloomberg,$11.5 trillion is expected to be invested in new power generation assets until 2050,of which 86% is expected to go to zero-emissions technologies and 73%, or $8.4 trillion, to wind and solar.This could represent around $255 billion per year.By 2030,there may be more than twice the renewable capacity for every dollar spent compared to today. By 2050, the amount could

		double again, such that a dollar invested buys four times the renewables capacity it does today. The levelized cost of an average PV plant is expected to fall by 71% by 2050 due to the ongoing cost declines in solar technology. Module costs are down 84% since 2010 and are expected to decrease another 52% from today to 2025 as manufacturers find further efficiencies throughout the production chain. Subsidies and government support are no longer necessary for renewables to be competitive.Battery storage is becoming a competitive reality.Wind and solar are already cheaper than coal, nuclear and gas, as a result growth is going to be immense, either through power purchase agreements, financial hedges or competition in the open market.We see very large growth opportunities in renewables and in other sectors supporting the transition towards a low carbon energy mix in the near-term, including natural gas and transmission lines. Climate change is also increasing water scarcity in many regions, which also represents a growth opportunity for Atlantica. We expect to invest between $200 and $300 million per year in acquisitions and investments in sustainable infrastructures. We believe the magnitude of the impact is high and the probability of this opportunity to happpen is very likely.
Access to capital	Impacted	In relation to Opportunity 2, since we distribute as dividend a very large portion of the cash we generate, access to capital is key for us to achieve our strategy. In the long term, we will need to finance our growth accessing the private and public capital markets with a combination of debt and equity. And in order to create value for our shareholders, we need to have a low cost of capital. If Atlantica doesn't meet investor's requirements on ESG disclosures our access to capital markets can decrease. If we are not able to accesss capital, this may limit our growth plans. In addition, cost of debt could be higher if our ESG rating worsened. Reputation of the company as a low carbon sustainable infrastructure enables us to access a larger and growing investor universe. We believe we are well positioned to that end. Investors who apply ESG criteria in their investment decisions have increased significantly in the last few years. In addition, different reports show that companies with a low ESG rating have a cost of capital higher by between 1% to 3% with respect to companies with a high ESG rating. We are working towards improving our ESG rating. In addition, we intend to use green financing solutions. In 2019 we closed our first green guarantee line with ING branch. The cost is linked to Atlantica's environmental, social and governance performance under a leading sustainable rating agency. The green guarantees will be exclusively used for renewable assets. We believe the magnitude of the impact is medium and the probability of this opportunity to happpen is very likely.

Assets	Impacted	The growth of our asset portfolio will directly translate into an increase in consolidated assets. We estimate to invest approximately between $200 and $300 million in equity value per year in order to achieve our growth targets, which can represent a much larger increase in total assets, since we normally finance our assets with project debt. In terms of risks, we monitor closely all the risks related to climate change, with special attention to physical risks. We are a sustainable infrastructure company and obtain our revenues from large infrastructures, most of which are renewable assets. We also own transmission lines, an efficient natural gas plant and two water assets. Acute or chronic physical climate change risks are monitored closely and taken into account in our financial planning process. This impact is related with Opportunity 1 described above "Development and /or expansion of low emission goods and services" we consider there is a very likely probability of this to happen and the magnitude of the impact would be high.
Liabilities	Impacted	In our financial planning we monitor closely potential liabilities which could arise from climate change risks. Droughts and increase in mean temperatures can increase the frequency and severity of wildfires, as we have seen in California in recent years. The U.S. National Climate Assessment report released in 2013 discussed the increasing risk of fires in California, indicating that numerous fire models project more wildfires as climate change continues, with up to 74 percent more fires in the region. According to this report, rising temperatures and droughts are increasing the frequency and intensity of fires in California. If our assets or transmission lines were deemed to have caused fires, which in turn may have caused damage to third parties, we may have to face liabilities. We consider this is related with our Risk 1 " Increased costs and /or reduced demand for products and services resulting from fines and judgements", we consider this risk is unlikely to happen and the magnitude of the impact would be medium-low.
Other		

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

No, but we anticipate doing so in the next two years

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

Yes

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

Atlantica is a sustainable total return infrastructure company that owns and manages renewable energy, efficient natural gas, transmission and transportation infrastructures and water assets in North America, South America and EMEA. Approximately 87% of our 2018 revenue came from low carbon footprint businesses.

According to the 2018 U.S Fourth National Climate Assessment Report (the U.S. Global Change Research Program) climate change impacts are intensifying, and the severity of future impacts will depend on the efforts to reduce carbon emissions and how fast adaptations are being implemented. On a global basis, the World Economic Forum's 2019 Global Risk Report identified extreme weather and failure to mitigate climate change as the two largest risks facing the global economy.

Our strategy is focused on climate change solutions in the power and water sectors and we therefore see sustainability as a major growth opportunity for us. We believe that renewable energy will represent the majority of new power generation in the short and mid-term and eventually it should become the only way to generate power. We plan to have an important role in this worldwide trend. Nevertheless, for this to become a reality, large investments will also be needed in what we call the renewable enablers; transmission, natural gas and battery storage. Large investments will be required in new "smarter" transmission and distribution networks, in efficient natural gas plants that can support renewable energy over the mid-term and in energy storage that will become economically efficient over time. Growth opportunities are enormous and Atlantica is at the forefront of this transformation with solid experience in all these sectors. In fact, we recently made our first investment in industrial scale electric battery storage.

If we look at water, we believe that water scarcity for industrial, agricultural and human consumption is also becoming a significant problem in many regions of the world. In 2018, we

produced desalinated water to meet the water needs of 2 million people. We expect to continue growing our presence in water as we believe that this market will become the next frontier, the same way wind and solar evolved from smaller markets into mainstream over the past two decades.
Atlantica was born sustainable and it will continue having sustainability as a key pillar in its strategy around the three components of ESG: Environment, Social and Governance. We plan to continue leading in this area, not only because it is good for the communities where we operate, but also because we believe that being sustainable in everything we do will result in better and more sustainable financial returns for our shareholders.

We intend to maintain an 80% of our portfolio in renewable, water assets and electric transmission lines. We are committed to reduction of CO2 emissions by investing in renewable energy assets. Furthermore, we set goals to further reduce CO2 emissions produced by our solar assets. Our current goal for the reduction of carbon emissions is to reduce the CO2/MWh ratio by 10% by 2030.
Investing in sustainable technologies and assets is only one part of our strategy. Managing those assets in a sustainable way is key to create value long term. In that regard, we have launched a number of initiatives to ensure that we manage efficiently, effectively and sustainably all key areas of our Company:

In addition, as part of its commitment with sustainability, Atlantica joined the United Nations Global Compact (the “UNGC”) initiative in January 2018 and has formally adopted the UN Global Compact Ten Principles. Atlantica is committed to orient its action to 6 of the 17 Sustainable Development Goals. The core goals for Atlantica include SDG13 (Climate Change), where we believe we can have a significant impact.

· Atlantica has been ranked among the Clean 200TM list which ranks the largest publicly listed companies that are leading the way with solutions for the transition to a clean energy future.

· We follow the recommendations of the Task Force on Climate-related Financial Disclosures (“TCFD”).

Our sustainable growth strategy is supported by several sources, all of them with a clear focus on clean energy and water infrastructure assets.

1. We believe we can achieve organic growth through the optimization of the existing portfolio, price escalation factors in many of our assets and the expansion of current assets, particularly our transmission lines, to which new assets can be connected. We currently own three transmission lines in Peru and four in Chile. We believe that current regulations in Peru and Chile provide a growth opportunity by expanding transmission lines to connect new clients. Additionally, we should have repowering opportunities in certain existing generation assets once their contracted life has expired.

2. We have in place exclusive Right of First Offer (“ROFO”) agreements for AAGES low-carbon footprint assets. AAGES is focused on the development and construction of clean energy and water infrastructure contracted assets. AAGES ROFO Agreement provides us a right of first offer to purchase any of the AAGES’ contracted assets or proposed contracted assets.

3. Additionally, we intend to enter into similar agreements or enter into partnerships with other developers or asset owners to acquire assets. We may also invest directly or through investment vehicles with partners in assets under development or construction, ensuring that such investments are always a small part of our total investments.

4. We also expect to continue acquiring assets from third parties leveraging the local presence and network we have in the geographies and sectors in which we operate.

C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e

(C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e) Disclose details of your organization's low-carbon transition plan.

A low-carbon transition plan as such does not apply to Atlantica as we were "born" in 2013 as a renewable energy company with sustainability as one of our core values. Our existence as such is in essence a low-carbon transition plan for global economy. In 2018, the revenues from Renewable Energy segment assets (solar, wind, hydro) represented over 76%, and revenues from low carbon footprint assets represented 83%. We intend to take advantage of favorable trends in the clean energy generation and electric transmission sectors globally, including energy scarcity and a focus on the reduction of carbon emissions in North America, South America and Europe as our core geographies.

C3.1g

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

Atlantica's business includes contracted and regulated assets where revenues are considered to be certain over a long period of time, 18 years in average as of December 31, 2018. We intend to implement climate-scenario analysis in the upcoming years.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Scope

Scope 1+2 (location-based)

% emissions in Scope

100

Targeted % reduction from base year

10

Metric

Metric tons CO2e per megawatt hour (MWh)*

Base year

2018

Start year

2019

Normalized base year emissions covered by target (metric tons CO2e)

1,871,281

Target year

2030

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

0

Target status

Underway

Please explain

Our current objective is to reduce 10% the ratio of the tons of CO2e per MWh by the year 2030. We have stablished this target in 2018, therefore we do not have any progress to show by the end of the year 2018.

% change anticipated in absolute Scope 1+2 emissions

10

% change anticipated in absolute Scope 3 emissions

0

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	7	2,100
Implementation commenced*	0	0
Implemented*	0	0
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for energy efficiency	We are a company that owns, manages, and acquires renewable energy, efficient natural gas, transmission lines and water assets and intends to take advantage of favorable trends in the power generation and electric transmission sectors globally, including energy scarcity and a focus on the reduction of carbon emissions.

	We estimate to invest in new clean energy assets by investing approximately $200m-$300m in equity value annually. We estimate that most of these acquisition will be renewable assets.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

In 2018, 87% of our revenue was from low carbon footprint assets including renewable energy, transmission lines and water assets. We have decided to maintain an 80% of our portfolio in clean energy and low carbon assets and intend to reduce our GHG emissions by 10% by 2030.

Our focus on renewables and sustainable technologies allows Atlantica to have greenhouse gas emissions rates at significantly lower levels than those normally produced by fossil fuel-power plants. In fact, last year we avoided almost 5 million tons of CO2 only in power generation versus the emissions that an equivalent fossil fuel fleet would have generated. Our 24 assets consisting of 15 renewable plants with a total capacity of 1,496 MW , 6 tranmission lines of 1,152 miles in length, 2 water desalinations plants with a total capacity 10m cubic feet a day and 1 cogeneration plant of 300 MW. All our assets except for our efficient natural gas plant are low carbon assets. The natural gas used at the plant is a waste-grade product provided free-of-charge by Pemex and upcycled by ACT into thermal power.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Low-Carbon Investment (LCI) Registry Taxonomy

% revenue from low carbon product(s) in the reporting year

87

Comment

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

Methane emissions are not relevant in our activities as technologies we employ do not result in a notable level of emissions of this type of gas.
In 2018, CH4 amounted to 348 ton and N2O amounted 3,28 ton compared to 1,947.4k ton of CO2. CH4 emissions represent 0,02% of CO2+CH4 emissions, as such, we do not consider it necessary to establish methane emission reduction targets at this time.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

1,811,177

Comment

As a United Kingdom company, Atlantica is subject to, and is in compliance with the requirements of the Climate Change Act 2008 for greenhouse gas emissions reporting. Additionally, our greenhouse gas emissions management complies with the requirements of the Commission Regulation (EU) No 601/2012. Emissions figures on this report are quantified and reported according to the guidelines of the ISO 14064. In accordance with this international standard, which was compiled according to the Green House Gas Protocol, we classified our emissions into 3 groups:
- Scope 1: Emissions of greenhouse gas from sources that are owned or controlled by the Company and the Group.
- Scope 2: Indirect emissions of greenhouse gas from consumption of purchased electricity, heat or steam.
- Scope 3 emissions are emissions associated to the supply chain or to transport. We reported Scope 3 in 2018 for the first time.

Scope 2 (location-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

144,605

Comment

As a United Kingdom company, Atlantica is subject to, and is in compliance with the requirements of the Climate Change Act 2008 for greenhouse gas emissions reporting. Additionally, our greenhouse gas emissions management complies with the requirements of the Commission Regulation (EU) No 601/2012. Emissions figures on this report are quantified and reported according to the guidelines of the ISO 14064. Our Scope 2 emissions are indirect emissions of greenhouse gas from consumption of purchased electricity, heat or steam.

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/a., we provide location based Scope 2 emissions.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

ISO 14064-1
The Greenhouse Gas Protocol: Public Sector Standard

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

1,811,172

Start date

January 1, 2018

End date

December 31, 2018

Comment

The reported emisions above represent our data for 2018. Over 99% of our Scope 1 emissions are verified by a third party. Emissions figures on this report are quantified and reported according to the guidelines of the ISO 14064. In accordance with this international standard, which was compiled according to the Green House Gas Protocol:
• Scope 1: Emissions of greenhouse gas from sources that are owned orcontrolled by the Company and the Group. The emissions are calculated based on the criteria defined by the GHG Protocol and includes all entities under our control. Our reported emissions also include emissions of methane (CH4), and nitrous oxide (N2O) as CO2 equivalents. We used the GHG inventories conversion factors indicated by the following organizations: - Intergovernmental Panel on Climate Change (the “IPCC”) - Department for Environment, Food and Rural Affairs of the United Kingdom Comisión Nacional de los Mercados y la Competencia (the “CNMC”) in Spain
Our Scope 1 greenhouse emissions of Scope 1 were externally verified in certain geographies within the scope of the certification of carbon credits. In Spain, our Scope 1 greenhouse emissions were verified by AENOR. AENOR stands for “Asociación Española de Normalización y Certificación”, a non-for-profit entity dedicated to development of standardization and certification across Spanish industrial and services sectors. In Mexico, our Scope 1 greenhouse emissions were verified by ANCE. ANCE stands for Asociación de Normalización y Certificación and represents an association dedicated to development of standardization and certification across industries in Mexico.

C6.2

(C6.2) Describe your organization’s approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

Comment

We report our Scope 2 emissions based on location

C6.3

(C6.3) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

144,605

Start date

January 1, 2018

End date

December 31, 2018

Comment

The reported above emisions represent our data of Scope 2 emission for 2018. Emissions figures on this report are quantified and reported according to the guidelines of the ISO 14064.

• Scope 2 are Indirect emissions of greenhouse gas from consumption of purchased electricity, heat or steam. The emissions are calculated based on the criteria defined by the GHG Protocol and includes all entities under our control. Our reported emissions also include emissions of methane (CH4), and nitrous oxide (N2O) as CO2 equivalents. We used the GHG inventories conversion factors indicated by the following organizations: - Intergovernmental Panel on Climate Change (the “IPCC”) - Department for Environment, Food and Rural Affairs of the United Kingdom - Comisión Nacional de los Mercados y la Competencia (the “CNMC”) in Spain Emissions figures on this report are quantified and reported according to the guidelines of the ISO 14064.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

GHG emission at our offices

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

Explain why this source is excluded

We are excluding emissions at our offices (London, Phoenix, Madrid, Seville, Argel, Upington, Montevideo, Santiago, Lima, Mexico) because they are considered to be irrelevant. Offices emissions constitute 0,0047% of total Atlantica GHG emissions (Scope 1 + Scope 2).

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

66,160.9

Emissions calculation methodology

Indirect emissions of purchased goods and services have been calculated using an economic input / output analysis using:
- economic data of the reporting period (year 2018)
- relevant emission factors obtained from the CEDA database 5 (Comprehensive Environmental Data Archive v 4.0)

Note: The emission factors of CEDA 5 only account for the carbon incorporated, not the emissions from the use of the product or service, which can be accounted for in another part of the carbon footprint.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Capital goods

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

2,044

Emissions calculation methodology

Indirect emissions of capital goods have been calculated using an economic input / output analysis using:
- economic data of the reporting period (year 2018)
- relevant emission factors obtained from the CEDA database 5 (Comprehensive

Environmental Data Archive v 4.0).
Note: The emission factors of CEDA 5 only account for the carbon incorporated, not the emissions from the use of the product or service, which can be accounted for in another part of the carbon footprint.
Emissions from capital goods have been calculated and determinated not relevant, since they only constitute a 0.3% of total Scope 3 footprint.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Emissions from capital goods have been calculated and determinated not relevant, since they only constitute a 0.3% of total Scope 3 footprint.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO2e

669,163.7

Emissions calculation methodology

For the calculation of this category we have used energy activity data collected, maintained and reported. These are stationary combustion, mobile combustion and electricity consumption.
Following the calculation guidelines of the GHG Protocol standard, we have divided the emissions of this category into three activities:
(1) "Well to Tank" emissions from fossil fuels (diesel, natural gas and pooling vehicles);
(2) Emissions "Well to Tank" of the purchased electricity ;
(3) Emissions due to the Generation and Transmission and Distribution of electricity purchased
Based on the emission factors of Scope 1 and 2 and the WTT factors of DEFRA 2018, we have calculated the percentage. This percentage has been applied to the emission factors of Scope 1 and 2 used by Atlántica to estimate the emissions of this category.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Upstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

45.3

Emissions calculation methodology

We have used economic data categorized as transport services and postal services and applied the relevant emission factor of CEDA 5, following the same methodology explained for Categories 1 and 2.
Emissions from this category have been calculated and determined not relevant, since they only constitute 0.01% of the total Scope 3 footprint. This category includes the emissions due to transportation and distribution of goods and services where Atlantica has financial control, as well as transport between facilities.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Emissions from this category have been calculated and determined not relevant, since they only constitute 0.01% of the total Scope 3 footprint. This category includes the emissions due to transportation and distribution of goods and services where Atlantica has financial control, as well as transport between facilities.

Waste generated in operations

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

944.6

Emissions calculation methodology

We have used primary data of the cuantity of each waste generated, and we have determined its destination through the LER code or the type of waste disposal indicated. When the LER code or the type of disposal was not available, we have taken as a reference the destination percentages of Ecoembes. In the case of our desalination plant, we have estimated that all the waste goes to landfill.
The emission factors of DEFRA 2018 have been used depending on the type of waste and its final destination (recycling, incineration, landfill, etc.).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Emissions from this category have been calculated and determined not relevant, since they only constitute 0.1% of the total Scope 3 footprint. This category includes emissions from the disposal and treatment of waste by a third party.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

1,023.8

Emissions calculation methodology

The emissions have been calculated using the corresponding Defra emission factors (2018).
For railway transport we use primary data to which we apply the relevant emission factor of the Catalan Office for Climate Change.
In the case of road transport, the number of rentals and collection and destination offices was available. From these data, the distance traveled has been estimated taking into account the distance from the point of origin and destination to the nearest plant of Atlantica.
For hotel nights, based on the number of nights posted, the relevant factor of DEFRA 2018 has been applied.
Emissions by air and rail transport have been provided by the travel agencies. For airs, the distance between destinations has been calculated using the Great Circle Mapper tool, classifying flights between short and long distances.
The emissions in business travel have been calculated and determined non-material, since they only constitute 0.1% of the total Scope 3 footprint. This category includes the emissions derived from employee business travel in vehicles owned or operated by third parties such as airplanes, trains, road, etc. We also include emissions for hotel nights in this category.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

97.7

Explanation

The emissions in business travel have been calculated and determined non-material, since they only constitute 0.1% of the total Scope 3 footprint. This category includes the emissions derived from travel of employees by business activities in vehicles owned or operated by third parties such as airplanes, trains, road, etc. We also include emissions for hotel nights in this category.

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

157

Emissions calculation methodology

For the calculation, the results of the household displacement pattern survey Movilia work-house, carried out by the Ministry of Development, have been used as a reference for the estimation of the total emissions of Atlantica in this category, extrapolating them

by number of employees per country.
The emissions from this category have been calculated and determined not relevant, since they only constitute 0.02% of the total Scope footprint 3

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

The emissions in this category have been calculated and determined not relevant, since they only constitute 0.02% of the total Scope footprint 3

Upstream leased assets

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

5,824.9

Emissions calculation methodology

The emissions have been estimated through an economic input / output analysis using the emission factors of the CEDA 5 database (Comprehensive Environmental Data Archive v 5.0.
Note: CEDA 5 emission factors only account for the carbon incorporated, not the emissions from the use of the product or service which can be accounted for elsewhere in the carbon footprint.
Emissions in this category have been calculated and determined not relevant, since they only constitute 0.7% of the total Scope 3 footprint. This category includes the operation of goods leased by Atlantica in 2018, not included in the scope 1 and 2. In the case of Atlantica, this includes rental of cranes, technical equipment, pumps, machinery or leasing.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Emissions from this category have been calculated and determined not relevant, since they only constitute 0.7% of the total Scope 3 footprint. This category includes the operation of goods leased by Atlantica in 2018, not included in the scope 1 and 2. In the case of Atlantica, this includes rental of cranes, technical equipment, pumps, machinery or leasing.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Explanation

Atlantica does not offer tangible products, so this category is not relevant

Processing of sold products

Evaluation status

Not relevant, explanation provided

Explanation

Atlantica does not offer tangible products, so this category is not relevant

Use of sold products

Evaluation status

Not relevant, explanation provided

Explanation

Atlantica does not offer tangible products, so this category is not relevant

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Explanation

Atlantica does not offer tangible products, so this category is not relevant

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

There are no assets of the company leased to other entities in the year of the report which are not included in Scope 1 and 2.

Franchises

Evaluation status

Not relevant, explanation provided

Explanation

Atlantica has no franchises, so this category is not relevant

Investments

Evaluation status

Relevant, calculated

Metric tonnes CO2e

47,144.6

Emissions calculation methodology

This category includes emissions associated with the investments of Atlantica in 2018. In this case, we account for the Honaine plant, of which we have primary data on electricity consumption and we estimate Scope 1 emissions from similar desalination plants in Atlantica. We grant a percentage of these emissions that corresponds to the ownership percentage on Honaine (approximately 25%).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Other (upstream)

Evaluation status

Not relevant, explanation provided

Explanation

Atlantica has no other upstream emissions

Other (downstream)

Evaluation status

Not relevant, explanation provided

Explanation

Atlantica has no other upstream emissions

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.00187

Metric numerator (Gross global combined Scope 1 and 2 emissions)

1,955,777

Metric denominator

unit total revenue

Metric denominator: Unit total

1,043,822,000

Scope 2 figure used

Location-based

% change from previous year

2.3

Direction of change

Increased

Reason for change

Scope 1 GHG emissions have increased mainly due to an increase in natural gas consumption in ACT, our efficient natural gas plant, which generates approximately 90% of our total emissions. In 2018, this plant has been operating at partial load for a higher number of hours at the request of our client.

Intensity figure

0.194

Metric numerator (Gross global combined Scope 1 and 2 emissions)

1,871,281

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

9,649,931

Scope 2 figure used

Location-based

% change from previous year

7.1

Direction of change

Increased

Reason for change

This ratio is calculated for our generation assets (solar, wind, efficient natural gas, hydro), taking into account Scope 1+Scope 2 of these assets (excluding emissions from transmission lines and water assets).
This ratio in 2018 was 0.181. The increase is due to:
- An increase of Scope1 emissions in our efficient natural gas asset .
- The reduction in generation.
Scope 1 GHG emissions have increased mainly due to an increase in natural gas

consumption in ACT, our efficient natural gas plant, which generates approximately 90% of our total emissions. In 2018, this plant has been operating at partial load for a higher number of hours at the request of our client.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	1,802,736	IPCC Fifth Assessment Report (AR5 – 100 year) 💬1
CH4	348	IPCC Fifth Assessment Report (AR5 – 100 year) 💬2
N2O	3	IPCC Fifth Assessment Report (AR5 – 100 year) 💬3

💬1ACT GHG emissions are calculated using GWP IPPC Fith Assessment Report (AR5-100 year): 1; 28 ; 265.
For solar, wind and water assets, we have used GWP IPPC Second Assessment Report (SAR-100 year).
ACT GHG emisión sare 98% of total Atlantica GHG emissions.

💬2ACT GHG emissions are calculated using GWP IPPC Fith Assessment Report (AR5-100 year): 1; 28 ; 265.
For solar, wind and water assets, we have used GWP IPPC Second Assessment Report (SAR-100 year).
ACT GHG emisión sare 98% of total Atlantica GHG emissions.

💬3ACT GHG emissions are calculated using GWP IPPC Fith Assessment Report (AR5-100 year): 1; 28 ; 265.
For solar, wind and water assets, we have used GWP IPPC Second Assessment Report (SAR-100 year).
ACT GHG emisión sare 98% of total Atlantica GHG emissions.

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	69.37	316.22	0	6,709	Fugitives emissions
Combustion (Electric utilities)	1,801,746	32.12	322	1,803,498	Emissions from stationary combustion
Combustion (Gas utilities)	0	0	0	0	We do not own gas utilities. Efficient natural gas asset in Mexico is included in row Combustion(Electric utilities)
Combustion (Other)	921	0.1	0.06	961	Emissions from mobile combustion
Emissions not elsewhere classified	0	0	0	0	

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Mexico	1,783,647
Spain	25,141
United States of America	1,634
Peru	55
South Africa	538
Chile	97
Algeria	35
Uruguay	24

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division
By facility
By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
EMEA	25,715
North America	1,785,281
South America	176

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
ACT	1,783,647	17.1015	-93.115738
Solana	12,222	32.921313	-112.979356
Mojave	412	35.013945	-117.329381
Kaxu	538	-28.880494	19.592857
Cadonal	19	-33.59827	-56.67504
Palmatir	4	-32.593125	-56.440168
Helioenergy1	1,984	37.578953	-5.157337
Helioenergy2	1,915	37.578953	-5.157337
Solaben3	1,526	39.229261	-5.398317
Solaben2	1,419	39.229261	-5.398317
Solacor1	1,813	37.959243	-4.502332
Solacor2	1,356	37.959243	-4.502332
Helios2	2,055	39.238787	-3.475009
Solnova4	1,760	37.416607	-6.274359
Solaben6	1,601	39.229261	-5.398317
Solaben1	2,794	39.229261	-5.398317
Helios1	2,059	39.238787	-3.475009
Solnova1	1,578	37.416607	-6.274359
Solnova3	1,311	37.416607	-6.274359

PS20	1,648	37.44317	-6.254752
Hidrocañete	0	-13.070436	-76.307338
PS10	324	37.44317	-6.254752
Estrellada	1	-32.603579	-54.229284
Sevilla PV	0	37.44317	-6.254752
Skikda	35	36.883394	6.966264
Transmission lines Chile	97	-38.001798	-71.473991
Transmission lines Perú	55	-10.299471	-76.646968

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Renewable Energy	27,338
Efficient Natural Gas	1,783,647
Transmission	152
Water	35

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility generation activities	1,810,985	This represents our gross Scope 1 emissions expresed in CO2e from electric generation activities (Solar, Wind, Efficient Natural Gas, Hydro)

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Mexico	90		155	

Spain	37,569		96,330	
United States of America	15,719		44,528	
Peru	13		36	
South Africa	6,815		7,951.76	
Chile	0.84		1.32	
Algeria	84,307		122,184	
Uruguay	93		253	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division
By facility
By activity

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
EMEA	128,691	
North America	15,809	
South America	108	

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
ACT	90	
Solana	11,934	
Mojave	3,785	
Kaxu	6,815	
Cadonal	45	
Palmatir	46	
Helioenergy1	3,003	
Helioenergy2	2,773	
Solaben3	2,666	

Solaben2	2,777	
Solacor1	2,300	
Solacor2	2,380	
Helios2	2,923	
Solnova4	2,791	
Solaben6	2,976	
Solaben1	2,771	
Helios1	3,079	
Solnova1	2,447	
Solnova3	3,159	
PS20	832	
Hidrocañete	13	
PS10	691	
Estrellada	2	
Sevilla PV	0	
Skikda	84,307	
Chile	1	
Peru	1	

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Renewable Energy	60,209	
Efficient Natural Gas	90	
Transmission	2	
Water	84,307	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	
Other emissions reduction activities	0	No change	0	
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions	108,758	Increased	5.89	Scope 1+2 emissions 2017:1847016 Scope 1+2 emissions 2018: 1955774 Variation = 108758 (5.89% of 2017 emisiones) Scope 1 GHG emissions have increased mainly due to an increase in natural gas consumption in ACT, our efficient natural gas plant, which generates approximately 90% of our total emissions. In 2018, this plant has been operating at partial load for a higher number of hours at the request of our client. In ACT we have a tolling agreement according to which we

				receive water and natural gas from the client and give them back electricity and steam, in the amount they request.
Unidentified				
Other				

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	8,921,727	8,921,727
Consumption of purchased or acquired electricity		0	271,440	271,440
Consumption of self-generated non-fuel renewable energy		326,260		326,260
Total energy consumption		326,260	9,193,167	9,519,427

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

9,186

MWh fuel consumed for self-generation of heat

9,186

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Comment

Atlantica consumes diesel for industrial process plant and equipment, such as emergency generators, emergency pumps, and machinery.

Fuels (excluding feedstocks)

Natural Gasoline

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

2,149

MWh fuel consumed for self-generation of heat

2,149

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Comment

Atlantica consumes gasoline for industrial process plant and equipment, such as cars and machinery.

Fuels (excluding feedstocks)

Propane Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

297

MWh fuel consumed for self-generation of heat

297

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Comment

Atlantica consumes propane for generation of heat in HTF boilers

Fuels (excluding feedstocks)

Liquefied Natural Gas (LNG)

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

8,910,095

MWh fuel consumed for self-generation of heat

87,788

MWh fuel consumed for self-cogeneration or self-trigeneration

8,822,307

Comment

Atlantica consumes LNG for cogeneration process and for generation of heat in HTF boilers.

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Diesel

Emission factor

0.0741

Unit

metric tons CO2 per MWh

Emission factor source

The emission factor source is IPPC 2007, Chapter 2

Comment

Liquefied Natural Gas (LNG)

Emission factor

0.0561

Unit

metric tons CO2 per GJ

Emission factor source

The emission factor source for ACT calculation is IPPC 2006, Chapter 2

Comment

The emission factor (0.0561) source for ACT calculation is IPPC 2006, Chapter 2
The emission factor (0.0564) source for solar plants calculation is IPPC 2007, Chapter 2

Natural Gasoline

Emission factor

0.069

Unit

metric tons CO2 per GJ

Emission factor source

The emission factor source is IPPC 2007, Chapter 2

Comment

Propane Gas

Emission factor

0.0636

Unit

metric tons CO2 per GJ

Emission factor source

The emission factor source is IPPC 2007, Chapter 2

Comment

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	5,366,378	330,940	3,048,892	275,354
Heat	0	0	0	0
Steam	4,283,553	0	0	0
Cooling	0	0	0	0

C-EU8.2e

(C-EU8.2e) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. We do not own assets based on coal technology

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. None of our plants use lignite

Oil

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. We do not own assets based on oil.

Gas

Nameplate capacity (MW)

300

Gross electricity generation (GWh)

2,317.49

Net electricity generation (GWh)

2,261.9

Absolute scope 1 emissions (metric tons CO2e)

1,783,647

Scope 1 emissions intensity (metric tons CO2e per GWh)

769.64

Comment

The ratio of Scope 1 per GWh of electricity is 769.64 tons CO2e/GWh.
Our Cogeneration plant generates also steam (4,283,553 MWh in 2018).
The ratio of Scope 1 per GWh generated (electricity and steam) is 270.2 tons CO2e/GWh.

Biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. We do not own assets based on biomass.

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. We do not own assets based on waste.

Nuclear

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. We do not own assets based on nuclear technology.

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. We do not own assets based on geotermal technology.

Hydroelectric

Nameplate capacity (MW)

4

Gross electricity generation (GWh)

22.08

Net electricity generation (GWh)

22.08

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Our mini-hydro plant of 4 MW was acquired in February 2018.

Wind

Nameplate capacity (MW)

150

Gross electricity generation (GWh)

317.58

Net electricity generation (GWh)

317.28

Absolute scope 1 emissions (metric tons CO2e)

23.2

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.07

Comment

We own 3 wind assets (Palmatir, Cadonal, Melowind), with the capacity of 50 MW each one. The acquisition of Melowind was announced on December 2018. The emissions and generation for 2018 do not include Melowind since it was considered only for a few days in 2018. We will include Melowind in 2019.

Solar

Nameplate capacity (MW)

1,342

Gross electricity generation (GWh)

2,709.23

Net electricity generation (GWh)

2,434.17

Absolute scope 1 emissions (metric tons CO2e)

27,313.9

Scope 1 emissions intensity (metric tons CO2e per GWh)

10.1

Comment

We own eleven solar plants with a total capacity of 1,342 MW located in the United States, Spain and South Africa. The solar plants produced 2,709 GWh of electricity during 2018.

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. We generate renewable energy from solar, wind and hydro.

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. We generate non-renewable energy from our efficient natural gas asset in Mexico.

Total

Nameplate capacity (MW)

1,796

Gross electricity generation (GWh)

5,366.38

Net electricity generation (GWh)

5,035.43

Absolute scope 1 emissions (metric tons CO2e)

1,810,984.5

Scope 1 emissions intensity (metric tons CO2e per GWh)

337

Comment

We have included in this paragraph the Absolute scope 1 emissions from electricity utilities (solar, wind, natural gas and hydro). The total scope 1 emissions from Atlantica operations is 1,811,172.
The 2018 output produced by renewable source energy (solar, wind and hydro) represented 55% in 2018.

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

Low-carbon technology type

Region of consumption of low-carbon electricity, heat, steam or cooling

MWh consumed associated with low-carbon electricity, heat, steam or cooling

Emission factor (in units of metric tons CO2e per MWh)

Comment

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region

Chile

Voltage level

Transmission (high voltage)

Annual load (GWh)

1,175.5

Scope 2 emissions (basis)

Location-based

Scope 2 emissions (metric tons CO2e)

1

Annual energy losses (% of annual load)

5

Length of network (km)

140

Number of connections

4

Area covered (km2)

2.2

Comment

The "Annual Load" indicated above of 755.3 does not include a 6-mile transmission line.

Country/Region

Peru

Voltage level

Transmission (high voltage)

Annual load (GWh)

1,000

Scope 2 emissions (basis)

Location-based

Scope 2 emissions (metric tons CO2e)

1

Annual energy losses (% of annual load)

5

Length of network (km)

1,628

Number of connections

42

Area covered (km2)

69

Comment

The "Annual Load" indicated above of 1000 represents the highest capacity (not GWh) of our circuits in Peru. There are in total 14 circuits with various capacity ranging from 150MVA to 700MVA. There are 14 conductors with various capacity ranging from 150MVA to 1000MVA. The tranmission lines have less than 5% of losses.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Other, please specify

Water withdrawal for renewable power

Metric value

3.41

Metric numerator

cubic meters of wáter withdrawn

Metric denominator (intensity metric only)

MWh generated

% change from previous year

1.8

Direction of change

Increased

Please explain

In 2018, we withdrew 10.4 million cubic meters of fresh water at our power generation plants and we returned 2.2 million cubic meters (21%) back to the source. In 2017, we withdrew 10.6 million cubic meters of fresh water and returned 2.7 million cubic meters (24%) back to the source. The water returned to the environment is tested by independent external laboratories on a period basis to ensure its quality. Our efforts to improve our water management beyond compliance is a main factor behind the reduction of withdrawal volumes in 2018 compared to 2017. We implemented better practices for use of water in operation and maintenance of our solar plants, such as adjustments in the operating cycles of the water cooling towers. In 2018, we withdrew 10.4 million cubic meters which represented 47% of the limits allowed by our water permits. In 2017, we withdrew 10.6 million cubic meters which represented 49% of the limits allowed by our water permits. The difference between the water permit limits and actual water withdrawn represents water savings.
The total amount of water withdrawal has decreased from 10606210 to 10383290, but the ratio has increased because of the decrease in the generation.

Description

Other, please specify

Water withdrawal for desalination

Metric value

2.2

Metric numerator

cubic meters of water withdrawn

Metric denominator (intensity metric only)

Hm3 produced

% change from previous year

0

Direction of change

No change

Please explain

Our Water segment includes two desalination plants. We withdraw sea water for desalination purposes as specified in the concession agreements of our two desalination plants. Thus, in 2018, we withdrew 220.2 million cubic meters of sea water, which went through the desalination process of salt and minerals removal in our water treatment facilities to prepare it for human use. The difference between water withdrawn

from and returned to the sea is the desalinated potable water delivered to the water utility, as specified by our take-orpay concession agreements for consumption needs of approximately 2.2 million people.

Description

Other, please specify

Water discharges (renewable power)

Metric value

0.7

Metric numerator

cubic meters of water discharged

Metric denominator (intensity metric only)

MWh generated

% change from previous year

14

Direction of change

Decreased

Please explain

Our efforts to improve our water management beyond compliance is a main factor behind the reduction of withdrawal and discharged volumes in 2018 compared to 2017. We implemented better practices for use of water in operation and maintenance of our solar plants, such as adjustments in the operating cycles of the water cooling towers.

Description

Other, please specify

Water discharges (desalination)

Metric value

1.2

Metric numerator

cubic meters of water discharged

Metric denominator (intensity metric only)

Hm3 produced

% change from previous year

0

Direction of change

No change

Please explain

Description

Waste

Metric value

2,480

Metric numerator

tons of hazardous waste

Metric denominator (intensity metric only)

not applicable

% change from previous year

53

Direction of change

Increased

Please explain

Part of the hazardous waste generated in 2018 was controlled and confined, avoiding any land contamination. Additionally, to reduce hazardous waste, some of our assets have bio-solution plants that break down contaminating substances.
Our target in relation to waste goes beyond legal compliance. We have a strong commitment to continue reducing the generation of waste related to our operations.

Description

Waste

Metric value

21,759

Metric numerator

tons of non hazardous waste

Metric denominator (intensity metric only)

non applicable

% change from previous year

6.7

Direction of change

Decreased

Please explain

The non-hazardous waste produced in our assets derives from the waste water treatment plants and the reuse of the waste water before the discharge.
Most of the non-hazardous waste was generated in Solana, Mojave and Helios and comes from water treatment (filter cake). We make important efforts to find alternative uses to landfill. For example, in Solana 60% of non-hazardous waste is used as organic fertilizer by a local farmer.
Part of the hazardous waste generated in 2018 was controlled and confined, avoiding any land contamination. Additionally, to reduce hazardous waste, some of our assets have bio-solution plants that break down contaminating substances.
Our target in relation to waste goes beyond legal compliance. We have a strong commitment to continue reducing the generation of waste related to our operations.

C-EU9.5a

(C-EU9.5a) Break down, by source, your total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Solar	1,324,859	100	2019	Our capex plan is achieved mainly through acquisitions or investments in new assets or businesses. Our maintenance capex is not signficant since most of the maintenance capex costs are included in our operation and maintenance agreements and recorded as operating expenses.

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Other, please specify	The capex represents the improvements we planned for 2019 at our renewable asset and transmission lines to increase	1,324,859	100	2019

	production, reduce costs or improve operations.			

C-CO9.6/C-EU9.6/C-OG9.6

(C-CO9.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.

Investment start date

February 1, 2019

Investment end date

December 31, 2019

Investment area

Equipment

Technology area

Renewable energy

Investment maturity

Small scale commercial deployment

Investment figure

1,324,859

Low-carbon investment percentage

81-100%

Please explain

All our planed capex is related with our solar assets.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Sn1_24-01-2019.pdf

Page/ section reference

Solnova 1 Page 16. The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

76

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Sn3_24-01-2019.pdf

Page/ section reference

Solnova 3: Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

82

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Sn4_28-01-2019.pdf

Page/ section reference

Solnova 4: Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

72

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Helioenergy1_29-01-2019.pdf

Page/ section reference

Helioenergy1, Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

75

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Helioenergy2_29-01-2019.pdf

Page/ section reference

Helioenergy2, Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

74

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Solacor1_25-01-2019.pdf

Page/ section reference

Solacor 1. Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

90

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Solacor2_25-01-2019.pdf

Page/ section reference

Solacor 2. Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

85

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Helios1_21-01-2019.pdf

Page/ section reference

Helios 1. Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

66

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Helios2_23-01-2019.pdf

Page/ section reference

Helios 2. Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

72

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Solaben1_22-01-2019.pdf

Page/ section reference

Solaben 1 Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

73

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Solaben2_22-01-2019.pdf

Page/ section reference

Solaben 2. Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

73

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Solaben3_22-01-2019.pdf

Page/ section reference

Solaben 3. Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

63

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Solaben 6 22 01 2019.pdf

Page/ section reference

Solaben 6. Page 16 The verification only includes emissions from fuel combustion, but does not include fugitive emissions.

Relevant standard

European Union Emissions Trading System (EU ETS)

Proportion of reported emissions verified (%)

69

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Reporte_Consolidado_ACT_Energy.pdf

Page/ section reference

ACT. Page 1

Relevant standard

NMX-SAA-14064-3-IMNC: Instituto Mexicano de Normalización y Certificación A.C

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

Reporte_Consolidado_ACT_Energy.pdf

Page/ section reference

ACT. Page 1

Relevant standard

NMX-SAA-14064-3-IMNC: Instituto Mexicano de Normalización y Certificación A.C

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

EU ETS

% of Scope 1 emissions covered by the ETS

1.37

Period start date

January 1, 2018

Period end date

December 31, 2018

Allowances allocated

0

Allowances purchased

16,048

Verified emissions in metric tons CO2e

18,156

Details of ownership

Facilities we own but do not operate

Comment

Our assets under EU ETS are Spanish solar plantas: PS20, Solnova1, Solnova3, Solnova4, Helioenergy1, Helioenergy2, Solacor1, Solacor2, Helios1, Helios2, Solaben1, Solaben2, Solaben3 and Solaben6.

At each of our assets under the EU ETS, the emissions are subject to the control under the regulation. Each assets maintains documentation describing the methodology of the calculation of the greenhouse gas emission, documentation of the activities of the installation contributing to the emissions, data control and the system control. RENADE (Registro Nacional de Derecho de Emision), an electronic register accounting for the emissions rights tracks and avails the data related to the current rights in circulation and their ownership data. According to the regulation, starting 2013, our installation subject to EU ETS do not receive emission rights free of charge. Our installations must purchase them in the emissions rights market via public auctions. The control and accounting over the emissions rights is a responsibility of the owner of the installation who must comply with the requirements established by AEGEI (Autorizaciones de Emisión de Gases de Efecto Invernadero in Spain).

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

The EU emissions trading system (EU ETS) is a cornerstone of the EU's policy to combat climate change and its key tool for reducing greenhouse gas emissions cost-effectively. It is the world's first major carbon market and remains the biggest one. It works on the "cap and trade" principle. Within the cap, companies buy emission allowances which they can trade with one another as needed. The EU ETS was set up in 2005. It targets to reduce emissions from the sector covered by the system by 21% since 2015 to 2020 and by 43% to 2030. At each of our assets under the EU ETS, the emissions are subject to the control under the regulation. According to the regulation, starting 2013, our installation subject to EU ETS do not receive emission rights free of charge. Our installations must purchase them in the emissions rights market via public auctions.

Each of our solar plants in Spain has a AEGEI (“Autorización de Emisión de Gases de Efecto Invernadero”), which establishs the requirements related to the control and accounting over the emissions rights of the owner of the asset. Atlantica maintains documentation describing the methodology of the calculation of the greenhouse gas emission in each plant, complying with these authorizations. Each year, Atlantica performs internal audit to verify that GHG emissions calculations have been carried out according to the procedures and each authorization (AEGEI). Then, an external audit (AENOR) carries out the official verification of GHG emissions (Scope 1) in compliance with the EU emissions trading system (EU ETS). The reports of these

verifications are sent to the environmental authority (Ministerio de Medio ambiente de España) before the 28th of February of each year. Before the end of April, each asset must purchase emissions allowances needed to be sent to RENADE (Registro Nacional de Derecho de Emision). For example, this year we have purchased 18,156 to comply with the total amount of 18,156 tons of CO2e verified. (Sn3 and Sn4 had available emissions allowances from the first assignation in 2010)
In Mexico, emissions of our 300 MW plant is subject to the Mexico carbon tax. However under the local regulation, the emissions are audited and controlled as emissions of Pemex, our offtaker for whom ACT generates electricity and steam under a tolling agreement. We report the emissions to Pemex who in turn consolidates them and gets them audited and reported to the local regulator. The documentation and responsibility of these emissions is furnished under Pemex not Atlantica.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit origination

Project type

Wind

Project identification

Palmatir is an on-shore wind farm facility wholly owned by Atlantica, in Uruguay with nominal installed capacity of 50 MW. Palmatir has 25 wind turbines and each turbine has a nominal capacity of 2 MW.
AENOR, an Association for Standardisation and Certification, did the verification of VCS Project for Palmatir for the period May 13, 2014 and October 31, 2015. AENOR certified that the emissions reductions from Palmatir during this period amount to 125,466 tonnes of CO2. Credits originated in this period were sold in 2018.

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

125,466

Number of credits (metric tonnes CO2e): Risk adjusted volume

125,466

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change

% of suppliers by number

0

% total procurement spend (direct and indirect)

0

% Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

We have a Supplier Code of Conduct in place that promotes, among other requirements, high levels of compliance, respect for human rights and labour rights. Our aim is to extend our requirements to climate change and environmental issues in the near future. Therefore, in 2018 we decided to engage Ecovadis, a trusted provider of business sustainability ratings, intelligence and collaborative performance improvement tools for global supply chains. We expect to progressively certify our main suppliers.

Impact of engagement, including measures of success

We expect to send questionnaires to 25 suppliers in 2019.

Comment

N/A

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers

Trade associations

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Clean energy generation	Neutral	We contribute as a volunteer to the Voluntary Environmental Stewardship Program (VESP) sponsored by the Arizona Department of Environmental Quality (ADEQ). ADEQ through this program identifies and rewards organizations that have a good history of compliance with environmental requirements, and try to go above and beyond legal requirements. ADEQ strives to complement existing programs with new tools and strategies that not only protect people and the environment, but also recognize opportunities for reducing cost and encouraging technological innovation.	The efforts do not directly contribute to a legislative solution however we believe that our contribution, in the long term, will have an impact on the processes, approaches and perception that may have a footprint in the legislative solutions.
Clean energy generation	Neutral	As owners of a solar plant we are continuously in communication with the County Air Quality Department and their policy and regulation makers explaining the different processes of our plant concerning VOCs and HAPs emissions as well as the implementation of the technologies there is to control them.	The efforts do not directly contribute to a legislative solution however we believe that our contribution will, in the long term, have an impact on the processes, approaches and perception that may have a footprint in the legislative solutions.
Mandatory carbon reporting	Support	We are a supporter of the Task Force on Climate-Related Financial Disclosures and we have started to follow their recommendations in our	The efforts do not directly contribute to a legislative solution however we believe that our contribution will, in the long term, have an impact on the processes,

		2018 ESG Report. We also voluntary report oiur Scope 3 emissions.	approaches and perception that may have a footprint in the legislative solutions.
Clean energy generation	Support	Our solar assets in Spain receive revenues under a regulation based on a reasonable rate of returns which is subject to review every six years, with the first regulatory period ending at the end of 2019. On July 27, 2018, CNMC (the regulator for the electric system in Spain) issued a draft proposal for the calculation of the reasonable rate of return for the regulatory period 2020-2025. The draft reasonable rate of return proposed by CNMC was 7.04%. We submitted comments to the parameters used by the CNMC.	After all the comments received by the CNMC, on November 2, 2018, CNMC issued its final report with a proposed reasonable rate of return of 7.09%. This draft also contemplates the possibility of maintaining the current reasonable rate of return for certain assets under certain circumstances for two consecutive regulatory periods. This draft is non-binding, open to comments and would have to be approved by the Spanish parliament.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Atlantica is one of the four Vicepresidents of Protermosolar and is a member of the Board.
Protermosolar is the Spanish CSP Association that promotes thermosolar energy. This Association has more than 50 members and it is at the vice-presidency of Estela, the European thermosolar association. Protermosolar aims to promote thermosolar energy within a stable regulatory framework. It intends to support technology development and collaborate with state and central government to obtain efficient support programs. This association promotes the macroeconomic advantages that the use of this kind of technology has in the society and how this technology contributes to combat climate change. Protermosolar stands for the interests of the Spanish thermosolar industry regarding the applicable regulation.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The main objectives of Protermosolar, besides the defense of the interest of its associated members on regulatory issues, are:

• To promote the deployment of CSP plants in Spain, informing policy makers of the advantages of dispatchability and thermal storage as the most current feasible way to reduce the need of fossil fuel backup.

• To increase the support of R&D programs of Public Administrations at regional, national and European level and to orientate the application of resources towards an efficient use of public funding.

• To disseminate knowledge and best practices and the strong advantages to contribute to mitigate to climate change objectives

How have you influenced, or are you attempting to influence their position?

One of Atlantica's core values is Sustainability. Atlantica, as a Vicepresident and a member of the Board of directors Protermosolar has a relevant role on the definition of the strategy and activities of the Association.

Trade association

ESTELA is the European Mediterranean CSP Industry Association.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

ESTELA is the counterpart of the EU Commission and Parliament in discussion and elaboration of Energy and R&D policies regarding Renewables. ESTELA is a highly recognized stakeholder of the International Energy Agency - being member of its Renewable Industry Advisory Board and strong partner in the SolarPACES Implementing Agreement. ESTELA's opinions are also requested by other organizations such IRENA, REN21, World Bank, and many policy makers of the Sunbelt countries around the Globe.

How have you influenced, or are you attempting to influence their position?

Protermosolar is a founding member of ESTELA and one of the most active members within its Executive Committee. Atlantica has, therefore, an influential position through

Protermosolar in the activities of ESTELA.

Trade association

Uruguayan Association of Electric Energy Generation

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This Association contributes to the Energy diversification of Uruguay and we work to promote the development of renewable energy.

How have you influenced, or are you attempting to influence their position?

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

All the employees involved in this type of external activities are members of the top management or very close to this top management. They are perfectly aware of our overall climate change strategy through different management committees.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Complete

Attach the document

ESG-Report-2018.pdf

Page/Section reference

Environment section pages 18-38

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify

We have prepared the ESG Report following the guidance provided by SASB (IF0101). We have also used GRI standards for those aspects that we consider material to our business and which are not included in SASB. In addition we are following the TCFD.

Comment

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	CEO	Chief Executive Officer (CEO)

Submit your response

In which language are you submitting your response?

English

Please confirm below