

CLIMATE CHANGE

CARBON NEUTRAL

ACCIONA has taken climate change mitigation as a strategic objective. To this end, it commits its investment capacity and strives to achieve carbon neutrality in its operations through energy efficiency and by offsetting its emissions through the purchase of CO₂ emission allowances for renewable facilities in developing countries.



HIGHLIGHTS IN 2017

- Achievement of carbon neutrality by offsetting 100 % of emissions that could not be reduced.

- 14.4 million tonnes of CO₂ avoided, along with 9,979 tonnes of NO_x, 48,119 tonnes of SO_x and 318 tonnes of PM₁₀, thanks to 100 % renewable generation.

- Boost to the reduction of greenhouse gas emissions (GHGs) by means of the implementation of energy efficiency measures and the consumption of renewable energy.

- Top-down analysis of risks associated with climate change and updating of the risk maps of the company's businesses.

- Progress made on adaptation to climate change through the processing of a dossier of global measures.

- Obtaining maximum qualification in the CDP Climate and CDP Water indexes forming the Climate Change A List and Water A List, for its work on facing climate change and on sustainable water management.

MAIN CHALLENGES FOR 2018

- ▶ Continue to be a carbon neutral company in 2018.

- ▶ Use the internal price of carbon in the analysis of possible new investments or projects.

- ▶ Foster the purchase of electricity produced from renewable sources.

- ▶ Update the dossier of global measures for the company's adaptation to climate change.

- ▶ Make progress on the analysis and reporting of risks and opportunities associated with climate change, following the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD).

- ▶ Design and launch an advanced climate change course for company employees.

FIGHTING CLIMATE CHANGE, A STRATEGIC PRIORITY FOR ACCIONA

The fight against climate change is one of the company's key pillars, for which the management focus is part of its global sustainability and environment strategy, as one of its priority objectives of the Sustainability Master Plan 2020 (SMP 2020) is for the company to be carbon neutral every year from 2016.

ACCIONA has a climate change policy approved by its Board of Directors, which sets out the company's commitment and principles to combat this threat. The company prioritises leading the transition towards low-carbon business models that are resilient to climate change. To do so:

- Produces and sells renewable energy only, helping with the displacement of fossil fuels in national electricity mixes.
- Implements solutions in the energy efficiency field at its own centres and for its customers, optimising consumption and reducing the related GHG emissions.
- Constructs, operates and maintains new purification plants, wastewater treatment and desalination plants, helping manage the risks relating to the scarcity of and access to water, which will be increased with climate change.
- Strives to ensure research and development in the areas of mitigation and adaptation.
- Integrates risk mitigation actions into its business plans.

RISKS ASSOCIATED WITH CLIMATE CHANGE

The management of risks associated with climate change is integrated into the environmental risk management strategy of the company and its businesses, and is carried out through the application of a procedural methodology with which it identifies, assesses, prioritises and reports to the ACCIONA decision-making bodies the potential events related to climate change, which could have an impact on the group and its centres, so that action policies and tolerance thresholds are established that provide reasonable security for the achievement of objectives.

The climate risk management process includes the evaluation of present and future scenarios (short-, medium- and long-term), for which the probability of occurrence and consequences for the company (operational, economic and/or reputational) are analysed, in respect of:

- Physical risks: variation in average and extreme temperatures, variation in average rainfall, change in the rainfall patterns, change in the patterns of extreme events, rise in sea level, etc.
- Regulatory risks: climate policies arising from international decarbonisation commitments and objectives, carbon pricing systems, reporting and/or emissions reduction objectives, product efficiency regulations and standards, renewable energy regulations, etc.
- Other risks: impact on the supply chain, effect on habitats and ecosystems, changes in consumer behaviour, changes caused to human and cultural environments, fluctuations in the socioeconomic conditions, impacts on other stakeholders, etc.

In the process to identify and assess the risks associated with climate change, different exposure variables are analysed and different tools are used such as: tools for the monitoring of energy consumption and CO₂ emissions in the centres, actions to identify the generation of CO₂ emissions in the supply chain, energy generation management tools, financial analysis of the company, identification maps of climate risks provided by reference bodies (AR5 and AR4 Reports of the IPCC, Aqueduct-WRI, Germanwatch and World Bank), identification tools for legal requirements, procedures to manage the social impact, environmental management procedures, and the experience of the company's qualified staff.

The climate risk management process takes place on a business level and is conducted annually.

In addition, in 2017, a top-down analysis of the environmental risks associated with climate change in ACCIONA was carried out through the interrelation of the most significant climate hazards with geographical exposure and vulnerability of its activities.

DOSSIER OF GLOBAL MEASURES FOR ADAPTATION TO CLIMATE CHANGE.

In 2017, the dossier of global measures for the company's adaptation to climate change, was prepared. Through the review of 98 climate vulnerabilities, the document proposes 67 solutions for adaptation, of which at least 24 are already incorporated into the business lines.

The dossier covers the adoption of measures in fields like water management, the use of new materials, the redefinition of design standards or energy storage, and includes an approximate calculation of the expense deriving from its implementation. Additionally, it seeks to continue increasing awareness and training of its employees in the adaptation field, and to identify new business opportunities.

MITIGATING CLIMATE CHANGE THROUGH BUSINESS

Through its different businesses, the company contributes to the mitigation of climate change. Through electricity generation from renewable sources, ACCIONA Energy contributes to the displacement of fossil fuels in countries' electricity mix. In the case of Infrastructure, it offers solutions to the field of energy efficiency, successfully optimising consumption and displacing CO₂ emissions.

Under the scope of the SMP 2020, the company prepares plans and programmes to reduce its energy consumption and GHG emissions, whereby it analyses the adoption of measures that contribute towards mitigating climate change.

For 2017, ACCIONA set the internal objective of reducing its GHG emissions by 2.1 % compared to the previous year and it is committed to the "Science Based Targets" initiative for establishing reduction objectives based on science.

ACCIONA REWARDED AT THE CDP EUROPE AWARDS 2017

The award was made for its inclusion, with maximum qualification, on the Climate Change A List and Water A List, for its work on facing climate change and on sustainable water management.

Through this, ACCIONA has become one of just 27 companies to have obtained this double qualification, of the more than 3,000 analysed worldwide.



MORE INFORMATION

in the section "Investing exclusively in renewable energy" of the chapter "ACCIONA Energy's Commitment" and "Fighting climate change with energy efficiency" of the chapter "ACCIONA Infrastructure's Commitment"



MORE INFORMATION

on indexes in the section "Presence on sustainability indexes, rankings and ratings" of the chapter "ACCIONA's Commitment"

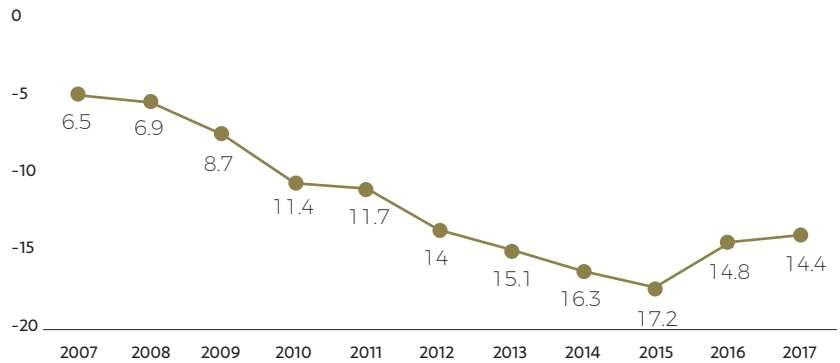
EMISSIONS AVOIDED

In 2017, ACCIONA avoided the emission of 14.4 million tonnes of CO₂ thanks to its energy generation activity from renewable sources. During the past year, this same generation avoided the emission into the atmosphere of 9,979 t NO_x, 48,119 t SO_x and 318 t PM₁₀.

FIGURE 1.

Evolution of the emissions avoided by ACCIONA

(millions of tonnes of CO₂)



ENERGY CONSUMPTION

In 2017, the company's energy consumption was 19,071 TJ, 30 % of which was from renewable sources. The company's energy intensity from fossil fuels was 1.8 TJ/€M of sales, while the energy intensity from renewable sources was 0.8 TJ/€M of sales. The energy consumption ratio of ACCIONA's buildings totalled 221 kWh/m².

TABLE 1.

Evolution of the company's energy consumption

(TJ)

Energy consumption	2014*	2015	2016	2017
Renewable	5,810	6,013	6,510	5,740
- Fuels	4,375	4,275	4,357	4,384
- Electricity	1,435	1,738	2,153	1,356
Non-renewable	6,900	7,204	9,488	13,331
- Fuels	5,292	5,666	7,432	8,787
- Electricity	1,608	1,538	2,056	4,544
Total (TJ)	12,710	13,217	15,998	19,071

* 2014 figure recalculated according to the methodological revision carried out starting this year.

FIGURE 2.
Energy consumption by source in 2017

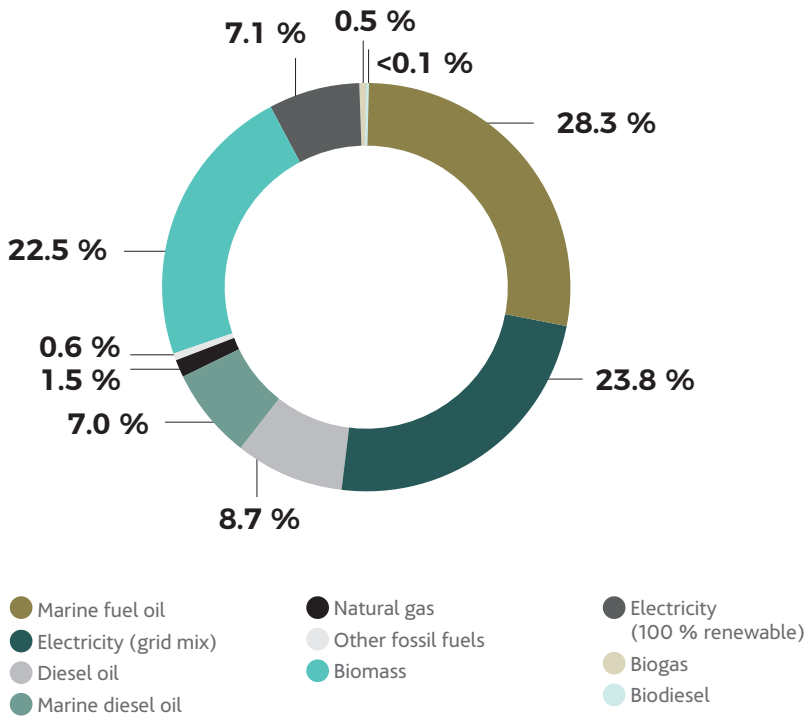
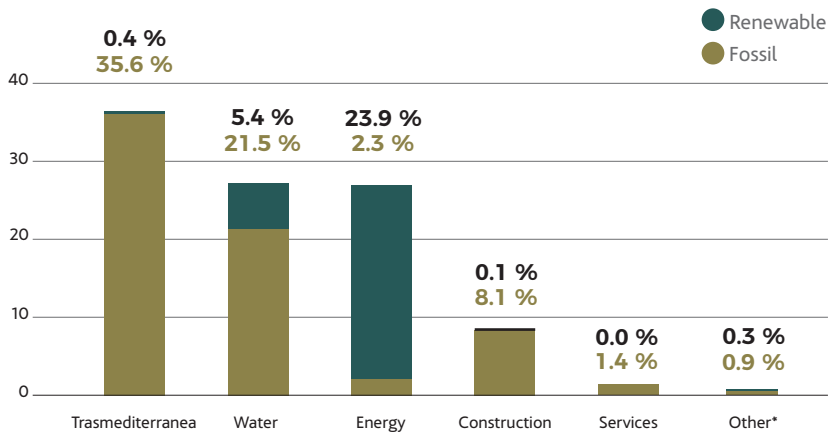


FIGURE 3.
Energy consumption by business in 2017



*Other includes Concessions, Industrial, ACCIONA Inmobiliaria and Wineries.

THIRD-PARTY ENERGY CONSUMPTION

Below is the most significant energy consumption outside of the organisation, calculated in accordance with the company's scope 3 categories.

TABLE 2.

Evolution of the external energy consumption

(GJ)

Type	2014	2015	2016	2017	
Upstream leased assets	3,098,024	1,911,173	2,376,162	1,815,757	
Downstream leased assets	8,337	Incorporated in internal energy consumption	Incorporated in internal energy consumption	Incorporated in internal energy consumption	
Employees commuting	448,162	681,871	696,541	788,330	
Business travel	227,058	231,023	239,899	242,624	
Waste generated in operations	380,344	200,520	293,148	197,506	
End of life treatment of sold products	2,444	11,744	1,235	1,909	
Use of sold products	Not available	21,005	6,437	836,599	
Investments	Not available	Not available	308,264	350,478	
Suppliers: 100 % of the purchase of goods and services	Coal	3,407,828	5,078,045	3,514,295	4,958,163
	Oil	20,284,487	23,106,810	14,501,044	9,079,530
	Natural gas	5,206,782	755,234	4,187,832	5,089,392
	Electricity (renewable)	913,848	1,385,922	764,932	2,015,636
	Electricity (nuclear)	660,496	754,187	302,826	748,390
TOTAL	34,637,811	34,137,533	27,192,615	26,124,314	

EMISSIONS GENERATED

Calculation of emissions generated

The emissions generated are calculated according to the criteria defined in the GHG Protocol, under the financial control scheme, consolidating as CO₂ equivalent emissions corresponding to all GHGs applicable to the company: CO₂, CH₄, N₂O, SF₆ and HFC. The criterion for the consolidation of energy consumption and other emissions follows the same accounting criteria.

The conversion factors used are those indicated by:

- The Intergovernmental Panel on Climate Change (IPCC), in the 2006 IPCC Directives for GHG inventories.
- National Inventory of Greenhouse Gases (GHGs) of Spain.
- International Maritime Organisation (IMO) through the implementing regulation (EU) 2016/1927 of the European Commission of 04 November 2016.

- International Energy Agency.
- Electricity Grid of Spain.
- ACCIONA Green Energy.
- Department for Environment, Food and Rural Affairs of the United Kingdom.
- The European Environment Agency.

Scope 1 and 2 emissions

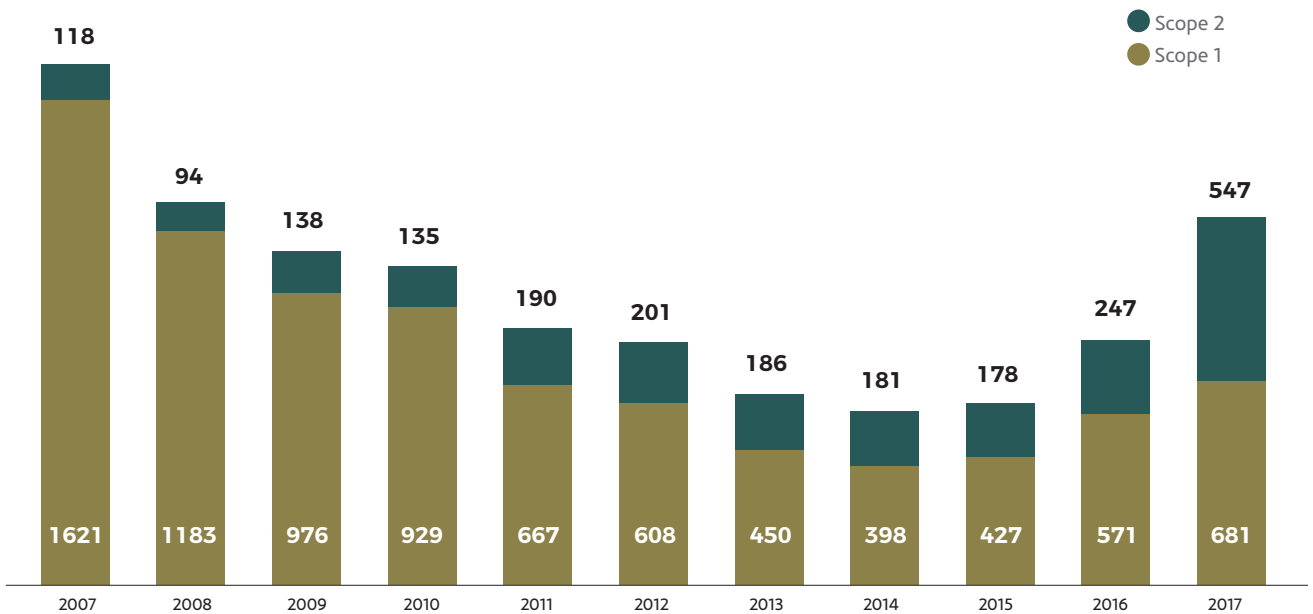
The total CO₂e emissions from Scopes 1 and 2 generated in 2017 were 1,228,540 tonnes, 681,488 t CO₂e of which correspond to Scope 1, and 547,052 t CO₂e to Scope 2 market-based (and 676,426 t CO₂ of scope 2 location-based).

The rise in Scope 1 emissions was mainly driven by the increased business activity of Trasmediterranea and ACCIONA Construction, while the increase in Scope 2 emissions was primarily due to desalination activities in countries suffering from water stress, in which access to electricity supply from renewable sources is very limited.

FIGURE 4.

Evolution of the emissions generated by ACCIONA

(thousands of tonnes of CO₂)

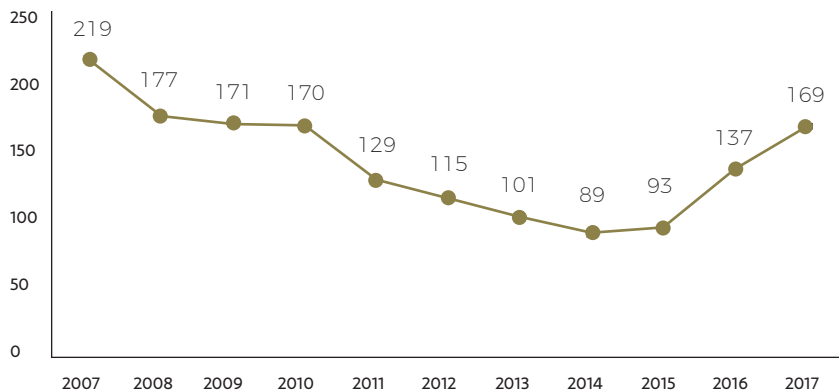


Note: Scope 1, direct emissions produced by the company, generally through the burning of fuels. Scope 2, indirect emissions generally due to electricity consumption.

ACCIONA's carbon intensity was 169 t CO₂e/€M of sales (scopes 1 and 2). As for the company's buildings, the ratio of CO₂ emissions was 35 kg CO₂e/m².

FIGURE 5.

Evolution of GHG emissions intensity (t CO₂e/sales)



Scope 3 emissions

Scope 3 emissions have increased by 43 % compared to the previous year, mainly due to the consideration of a greater number of sources in the calculation of emissions associated with supplier activities.

TABLE 3.

Emissions scope 3 (t CO₂e)

Type	2014	2015	2016	2017	
Upstream leased assets	226,499	144,587	182,917	139,579	
Downstream leased assets	534	Incorporated in scopes 1 and 2	Incorporated in scopes 1 and 2	Incorporated in scopes 1 and 2	
Employees commuting	32,651	49,764 (offset)	50,545	57,534	
Business travel	16,352	16,263 (offset)	16,927	17,190	
Waste generated in operations	28,183	14,859	22,057	14,861	
End of life treatment of sold products	181	870	93	144	
Use of sold products*	Not available	1,666	488	10,677	
Investments	Not available	Not available	15,865	39,040	
Suppliers: 100 % of the purchase of goods and services	Products, services and raw materials	912,036	957,028	632,060	958,299
	Capital goods	144,911	347,264	411,865	641,059
	Fuel consumption and electricity consumption	163,885	104,145	105,595	213,764
	Transportation	288,632	472,056	164,759	203,122
TOTAL (t CO₂e)	1,813,864	2,108,502 (66,027 offset)	1,603,171	2,295,269	

* Sale of homes in the ACCIONA Inmobiliaria area.

Other emissions

Global emissions of NOx in 2017 were 14,683 tonnes; SOx were 3,351 tonnes and PM₁₀ 958 tonnes, increasing by 19 %, 16 % and 20 % compared to the previous year, respectively. The rises in these figures were primarily due to the increased activity of Trasmediterranea, which accounts for 89 % of global emissions of NOx, 98 % of SOx emissions and 92 % of PM₁₀. SF₆ emissions totalled 0.094 tonnes. Lastly, biogenic emissions amounted to 443,415 t of CO₂.

TABLE 4

Evolution of other emissions

(t)

Emissions	2014	2015	2016	2017
PM ₁₀	565	641	795	958
NOx	8,683	9,590	12,298	14,683
SOx	1,936	2,237	2,888	3,351
SF ₆	0.423	0.443	0.179	0.094