

Colonial **Renewable energy and nearly
zero energy buildings policy
2018**



RENEWABLE ENERGY AND NEARLY ZERO ENERGY BUILDINGS POLICY

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1.2.

Basic principles

Clean energy development is essential to combat climate change, thus receiving the support of the international community at the "Paris Agreement", which is a binding global deal signed at the World Climate Summit that will enter into force in 2020.

From the environmental point of view, the Group's environmental policy, approved in June 2017, implements our commitments on energy efficiency and develops initiatives to reduce emissions, on which its performance is currently based on.

The sustainability Master Plan 2018-2020, which aims to go a step further in the environmental commitment of the company, sets up sustainable development goals, and also includes other challenges arising from climate change.

Grupo Colonial, a leading company in the real estate sector that embraces the principles of sustainable development, includes in the investment Master Plan, both for our current portfolio of assets and for future new construction buildings, a number of actions for this purpose and also integrates ground-breaking building automation and control systems (PropTech), and the development of the required infrastructures in line with the EU Energy Efficiency Directive.

OBJECTIVES

One of the main objectives is to achieve, where possible, nearly Zero Energy Efficiency Buildings (nZEB) by promoting green sourcing, continually investing in the improvement of the energy efficiency of building services and implementing renewable energies in existing buildings.

On the other hand, new buildings have been designed following passive standards and bioclimatic criteria.

Strategic lines of action

The objectives of the Group's environmental policy and the actions considered in the sustainability Master Plan, are aimed at reducing the emissions generated by the property portfolio's facilities.

The recommended actions include operational eco-efficiency analysis, the development of a strategic environmental plan for each building, as well as preparing renewable energy and nZEB reports. The reports will determine the most efficient improvement strategies and will be adapted for each type of building in line with nZEB targets.

The Grupo Colonial strategies will be guided by taking as reference the commitments assumed by the UE to mitigate climate change: 20-20-20 (reduction of GHG emissions, increase energy consumption from renewable sources, and reduction of primary energy consumption)

These strategies will lead, on the one hand, to achieve the highest energy efficiency performance and, on the other hand, to the fact that if energy is required for the operation of the buildings' services, this small amount of energy will be produced by renewable energy sources that are produced on site or in the surroundings.

The measures to be taken will include all the factors influencing the demand and consumption of the non-renewable primary energy of the building, as well as CO2 emissions both in the air-conditioning heating and cooling air production systems and in the ventilation, DHW production systems and lighting:

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- **Strategies to reduce the building's energy demand:**

Grupo Colonial suggests implementing, when possible, actions that are consistent with the current situation of the building without any significant upgrades and attaining an appropriate return on investment ratio, such as: heat recovery, free-cooling, thermal solar control panels, an increase in glass insulators, etc.

- **Optimization strategies and improvements in seasonal equipment performance:**

Grupo Colonial considers the possibility of improving the performance of the existing installations through the optimization of the operation of the main systems (for example, analysis of the key performance indicators) and piping and duct systems, and similarly considers the need to replace equipment for more efficient options.

- **Strategies to increase renewable energies on site or in the surroundings:**

Grupo Colonial considers the implementation of different renewable energy technologies on site that are considered suitable to the building's needs and to the possibilities for its implementation, proposing, if possible, the maximum reasonable percentage in line with the demands of the building. To this end, a feasibility study of the different options will be carried out based on climate, use and maintenance factors, etc., analysing installation costs, the estimation of energy savings and emissions reduction, as well as depreciation period.

The possibility of off-site renewable energy supply will be considered, including district heating and cooling systems.

- **Strategies to reduce final and primary energy production emissions:**

Grupo Colonial considers the current energy production sources of the building's installations and formulates alternative energy sources to reduce CO2 emissions in terms of production, distribution and commercialisation.

- **Green power supply:**

Over the next two years, Grupo Colonial plans to switch to green energy to a significant part of its current building portfolio. This would make it possible to offset the carbon footprint generated by the energy consumption of these assets.

According to the different strategies introduced, the annual and seasonal evolution of the assessed indicators will be traced to propose an approachment to nZEB objectives in a phased and ongoing basis, and also the measures will be technically defined along with an economic analysis of the required investment and depreciation period, while considering the use and maintenance of the different systems.

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