The ecofriendly choices of Estel

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Environmental policy and sustainability

Estel Group's commitment to a sustainable future

The management and control of quality, energy, environment and health and safety at work are essential aspects of Estel's company policy. The aim is to ensure that all end products and processing processes reflect high standards at all stages of their cycle.

Attention to quality, energy, environment, health and safety is guaranteed in all areas of the company's work: from the supply of goods and raw materials to development, production, marketing, logistics
and the disposal of waste. Quality control goes beyond the simple procedure error management, but aims to prevent them. Reduce the risk of error leads inevitably to better results.
Protecting the environment, reducing wast, preventing environmental damage and using resources efficiently is another key aspect of the company's policy.
On the one hand Estel offers systems for the furnishing of eco-sustainable interiors, on the other is committed to use energy more efficiently, reducing and optimizing waste.

Certifications

Environmental certifications can basically be divided into two main types: the certification of the **company's management system** and the certification of the **company's products**.

The certification of the environmental management system relates to the environmental impact of the company's business. Obtaining a certification of this type means demonstrating that the company operates in the area in an eco-compatible way, without causing damage to the environment and in compliance with the relevant legislation. In this case the subject of the certification are the company organization and the production system.

ISO 9001 certification

ISO 9001 certification guarantees that the company is able to respond to the growing competitiveness in the markets by improving customer satisfaction and loyalty.

ISO 14001 certification

ISO 14001 certification guarantees the organization's ability to define an environmental policy and objectives and to implement continuous improvement of environmental performance.

OHSAS 18001 certification

The OHSAS 18001 certification relates to health and safety in the workplace and establishes the company's commitment to the continuous improvement of the safety conditions of its workers.

Product certification, on the other hand, is a tool to ensure compliance of a product with the requirements established by technical standards or equivalent documents.
Certification is based on the control of the product and its production process.
Some examples of environmental product certifications are the Environmental Product Declaration EPD (Environmental Product Declaration) and environmental labels such as the Ecolabel.

FSC® (License Code FSC® C009706) Forest Stewardship Council® certification
Our FSC® certified products are made of controlled and FSC® certified materials.

LEED certification (acronimo di Leadership in Energy and Environmental Design)
LEED (acronym for Leadership in Energy and Environmental Design) is in fact a system of assessment and certification of buildings based on their characteristics of environmental sustainability, a standard born in the USA but now widespread in most of the world.

LEED certification

Estel products meet the requirements of “LEED” certificates for the sustainable buildings.
Here below the description of the characteristics with reference to each requirement

Recycled content (10-20%)

The total recycled content (post-consumer and post-industrial) of the product is on average over 50%. This depends on the use of raw materials with a high recycled content.

Certified wood

Estel has obtained the certificate FSC n° ICILA-COC-000264, concerning the production of furniture and partitions of the mixed FSC type.
All the wooden components of the products are made of wood belonging to the mixed FSC type.

Low emissive materials

All the glues used for the assembly of the furniture are solvent-free. The content of volatile organic compounds of the product relates only to the chipboard panel with values lower than those imposed by the standard.

Construction site waste management

The waste materials consist of the packaging which are made of fully recyclable materials (cardboard, polyethylene and polystyrene). These packaging materials are separated by type on site and returned to its premises by Estel, which selects them and disposes them for reuse or recycling by authorized companies (the rate sent to recycle is over 90%).

Planning for the indoor air quality management under construction

The assembly processes do not involve the production of dust and smell, since the assembly is carried out through mechanical couplings and screwing. The materials used have excellent resistance to humidity. During processing, the constant removal of the resulting materials, which are simply the packaging of the products, is expected.

Products

Our products are made entirely in Italy, within our three production sites: the entire production cycle of Estel Group furniture is checked in every single component and passage by experienced and qualified personnel.
Proud of our 100% Made in Italy quality, we have obtained the UNI ISO 14001 and 9001 voluntary certifications, recognized for the 360° control of the aspects that affect the ecosystem and for the production processes oriented to the highest quality of products and services.
Responsibility towards the environment begins with the choice of suppliers: our purchasing department prefers suppliers “at 0 km” aligned with the most recent standards in terms of sustainability and low environmental impact, oriented towards innovation and capable of optimizing use of raw materials by reducing production waste, simplifying the processing phases and perfecting packaging.

The will to work with certain criteria has the aim of protecting the environment while improving the efficiency and quality of its production processes. A simple gesture that arises spontaneously, of respect for the nature that surrounds us and that it provides us with material to work on every day.
Therefore, when designing the furnishings we take into account their production phase, the useful life cycle and subsequent disposal, trying to favor virtuous processes.
The supplies are developed trying to avoid as much as possible non-reversible gluing and assembly between different materials, favoring their differentiation and recycling at the end of their life.
For the finishing of Estel products, our production department uses only formaldehyde-free and heavy metal-free adhesives as well as lacquers and water-based paints.

For the realization of all the furnishings Estel uses chipboard panels made of recycled wood (for a fraction equal to 99%). The other main materials used (glass and steel) also have an important content of recycled material, such as to ensure that the finished Estel product as a whole is characterized by an important percentage of recycled material (by way of example, an operational desk reaches a percentage of about 60%, a container in melamine faced panel exceeds 90%).

In the design phase, the calculation of the recycled content of the product is carried out in advance, based on the fractions of the various materials that constitute it: for each product category Estel has defined an objective in terms of recycled content, therefore in this phase evaluate different combinations of materials / thicknesses / configurations in order to reach the defined goal.

At the production level, in order to reduce wood-type processing waste, during the production planning phase, the most suitable production mix is studied for the saturation of the cutting machines (optimizing software), combining the different production orders in order to fully exploit the useful surface of the wooden panels.

The use of FSC (Forest Stewardship Council) certified panels guarantees the origin of the wood. The environmental impact of furniture at the end of its life cycle is reduced by its ability to be disassembled and destined for proper disposal.
The metal, glass and aluminum components are 100% recyclable.

Durability and recyclability

Quality of the materials, attention to details and finishes, resistance guarantee the durability in time and reduce the costs of repair and maintenance. During the design phase which plays a primary role in defining the quality and the duration of the product, methods and tools for “review” and “modernization” of the product are used to extend its life.
Generally all spare parts will be available for a period of at least 10 (ten) years if with the possibility of extension, starting from the date of testing, in order to be able to proceed with any repair of the furniture instead of its replacement, in order to increase its useful life.
Right from the prototyping phase, all furnishings are subjected to a series of tests, both internal and third-party, in order to quickly identify any critical issues in terms of structural resistance; the validation of the design is subject to the positive outcome of these checks in order to improve the reliability of the furniture.

To facilitate the end-of-life treatment of the product and maximize its recyclability rate, Estel operates at 2 levels:

- choice of recyclable materials
- adoption of construction methods (in particular, couplings) that allow at the end of the useful life to completely, correctly and easily separate the different materials that make up the product, so that each can be directed to the respective recycling chain.

The recyclability rate of Estel furniture thus typically ranges between 90 and 100%.
The design is based on the LCA (Life Cycle Assessment) methodology as defined in the EN ISO 14040 and 14044 standards.
Plastic parts weighing ≥ 50 g, excluding synthetic material coatings, are marked with an identification mark that allows recycling in accordance with UNI EN ISO 11469 “Plastics - Generic identification and marking of plastic products “.

Packaging

For the packaging, Estel researches materials with low environmental impact, mainly cardboard, and studies the the packaging method in order to minimize the amount of material used; the packaging is also designed to allow for optimal filling of the means of transport.
Estel has progressively replaced packaging materials with cardboard, which currently accounts for 80% of the total packaging material used.
The cardboard is completely recyclable and made with recycled material for a minimum fraction of 90%.
The remaining fraction (20%) of the packaging used is made up of polyethylene and polystyrene films, which are completely recyclable.
All the packaging used complies with the 94/62/EC standard (and related additions) on packaging and packaging waste.
At the end of the installation of the products, all the packaging is separated on site by type of material (cardboard, polyethylene, polystyrene), placed in the respective bags and returned to its premises by Estel, which selects them and disposes them for reuse or recycling by authorized companies.

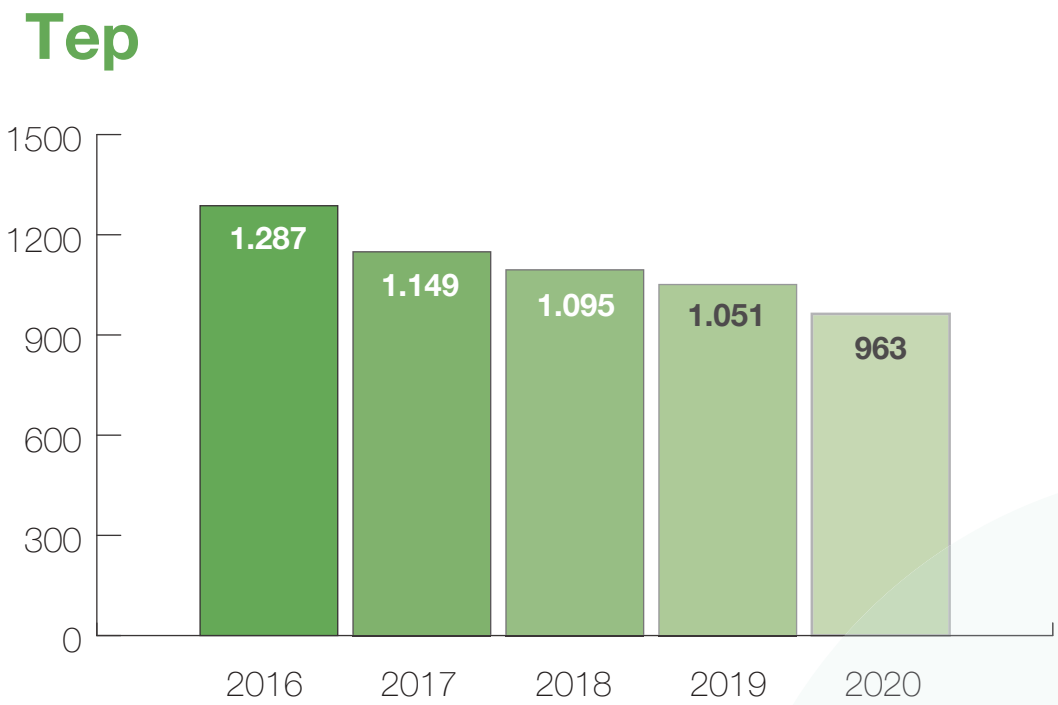
Electric energy

Over the last few years Estel has implemented a series of interventions with the aim of reducing electricity consumption:

- replacement of existing lighting fixtures (tubes al neon) with led luminaires;
- installation of inverter motors instead of traditional motors;
- renewal of air conditioning machinery with the installation of more energy efficient appliances.

Furthermore, in 2019 a reorganization of the production layout was started which will allow to further rationalize consumption, with an estimated reduction of between 10 and 15%.

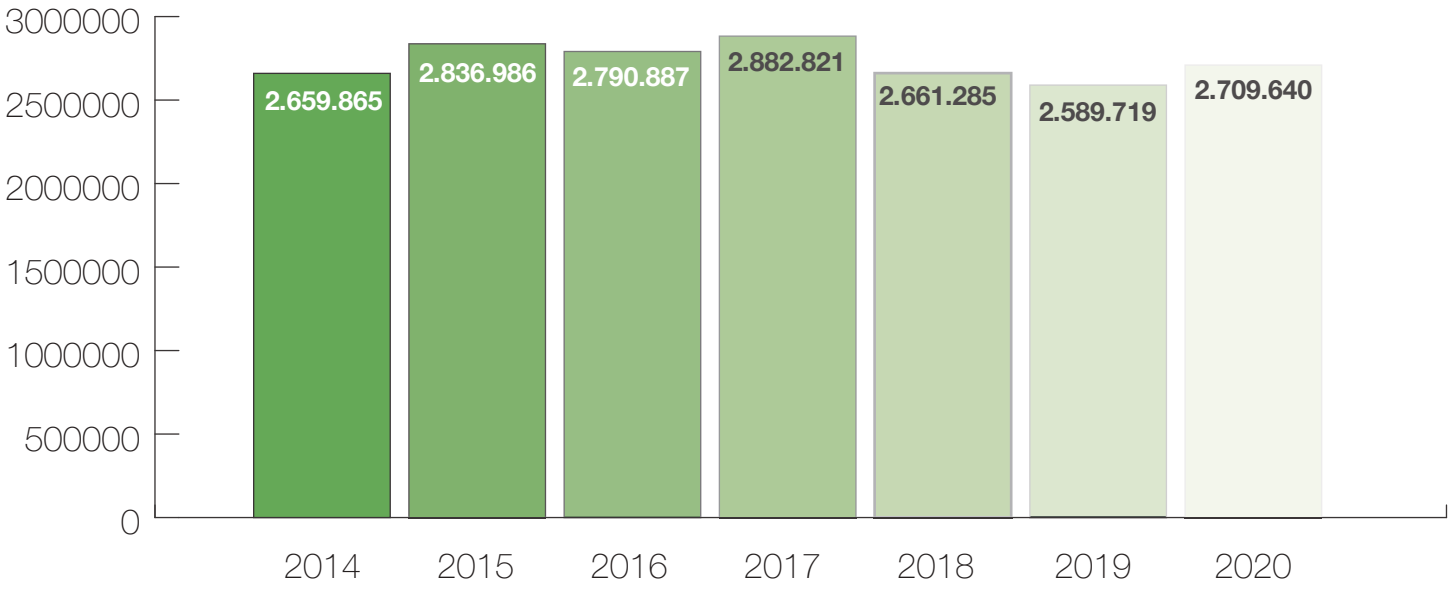
Electric energy consumption in tep



The photovoltaic plant

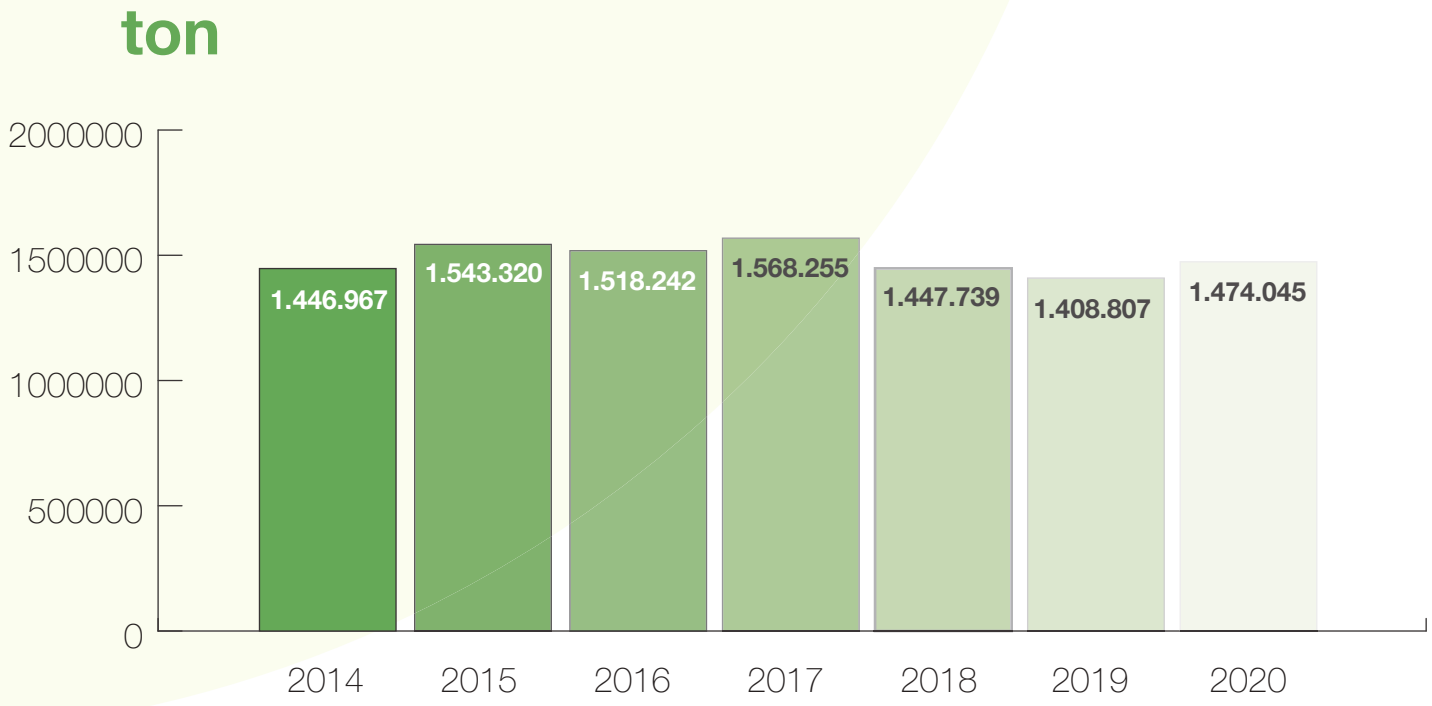
In order to improve its performance in terms of sustainability, the Estel group has decided to use clean energy sources to meet its energy needs, creating in the production plants of Thiene (VI), Arsiero (VI) and Massa 3 photovoltaic systems with a power of 955 kWp, 994 kWp and 648 kWp respectively, for a total of 2.6 megawatts. Thanks to these plants, approximately 2.700.000 kWh are produced annually, avoiding the release into the atmosphere of approximately 1.500 tons of CO2 per year.

Photovoltaic plant production (kWh)



Thiene plant has been in operation since December 2009 for a power of 527 kW. In 2010, the Arsiero plant (994 kW) was built, and the Thiene plant was completed (for a total of 955 kW).
Finally, in 2011 the Massa plant was built for 648 kW.

Avoided CO_2 emissions from fossil fuels



Water cycle

The water cycle of the painting booths is closed, and the suspended paint particles are coagulated with the addition of an additive (flocculant) and, after mechanical removal, disposed of as waste. The painting waters are also periodically disposed without ever being made to flow into the internal sewer system.
Similarly, the condensate from the compressors is collected in the tanks of an appropriate oil separator which separates the emulsified oils and those coming from the compressors and then conveys the treated water into the

internal sewer system. This and the cleaning of the gluing machines are the only process waste water generated, and are in small quantities compared to civil waste.
However, they pass through a series of tanks / wells, built in such a way as to retain both the heavy parts and the suspended parts, and only after crossing these tanks do they flow into the civil water network, and then reach an internal purifier, from which the waters are discharged in compliance with the limits for civil discharges and in the absence of dangerous substances.

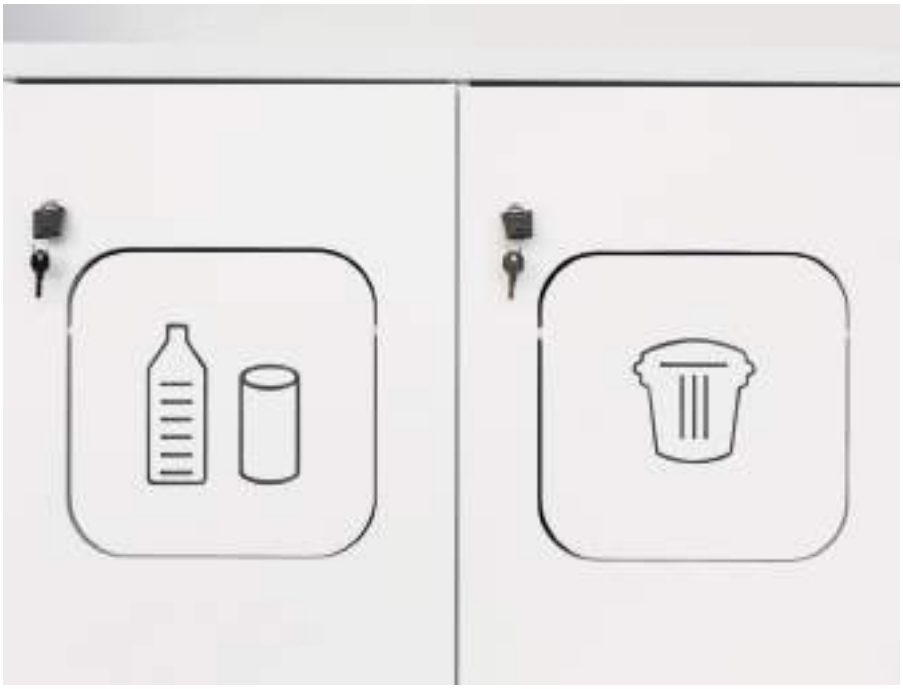
Emissions control

Estel strictly controls its emissions into the atmosphere by resorting to independent bodies, in order to ensure minimum environmental impact. To minimize polluting emissions, the plants are equipped with filtering and continuous measurement systems.

The use of water-based paints and vinyl and hot-melt glues reduces emissions of Volatile Organic Compounds (VOCs). The periodic assessments of the concentration of airborne pollutants in the work environment (among which, in addition to formaldehyde and volatile organic substances, there are the typical agents of wood processing such as acrylates and isocyanates) show a concentration well below the TLV-TWA of each pollutant.

Waste management

Estel reuses wood waste for energy production. The thermal needs (both for technological and heating use) are met through this energy recovery, eliminating the use of fossil fuels.
All other waste from the production cycle is carefully separated and delivered to specialized companies; in particular, recyclable materials are transferred to companies that recycle them directly or through third parties.

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