

Environmental Report 2015

TOWARD CARBON
NEUTRALITY





Industry Must Step Up to the Challenge of Climate Change

In December 2015, Paris hosted the 21st annual Conference of Parties (COP 21), also known as the 2015 Paris Climate Conference. It is now clearer than ever that the world has a very limited window of opportunity to mitigate dangerous climate change, and that the efforts to reduce emissions of greenhouse gases must accelerate.

All sectors of society need to contribute to the decarbonization of the world, including businesses. At Elopak, we are acutely aware of this need. We have for the past 10 years, worked systematically to reduce our own emissions. This report documents that we have already come far. In November 2015, we also joined the RE100 initiative for companies that pledge to source renewable electricity only.

However, we will not rest on our laurels. The ultimate goal for Elopak is that both our company and our products shall become carbon neutral, meaning that we have a zero net impact on the drivers of climate change. Our role in society is to protect the liquid foods produced by our customers, and in doing so, take part in providing important nutrition to people and preventing food waste. We are confident we can fill that role with a zero net impact on the climatic systems we all rely on.

Niels Petter Wright
CEO Elopak

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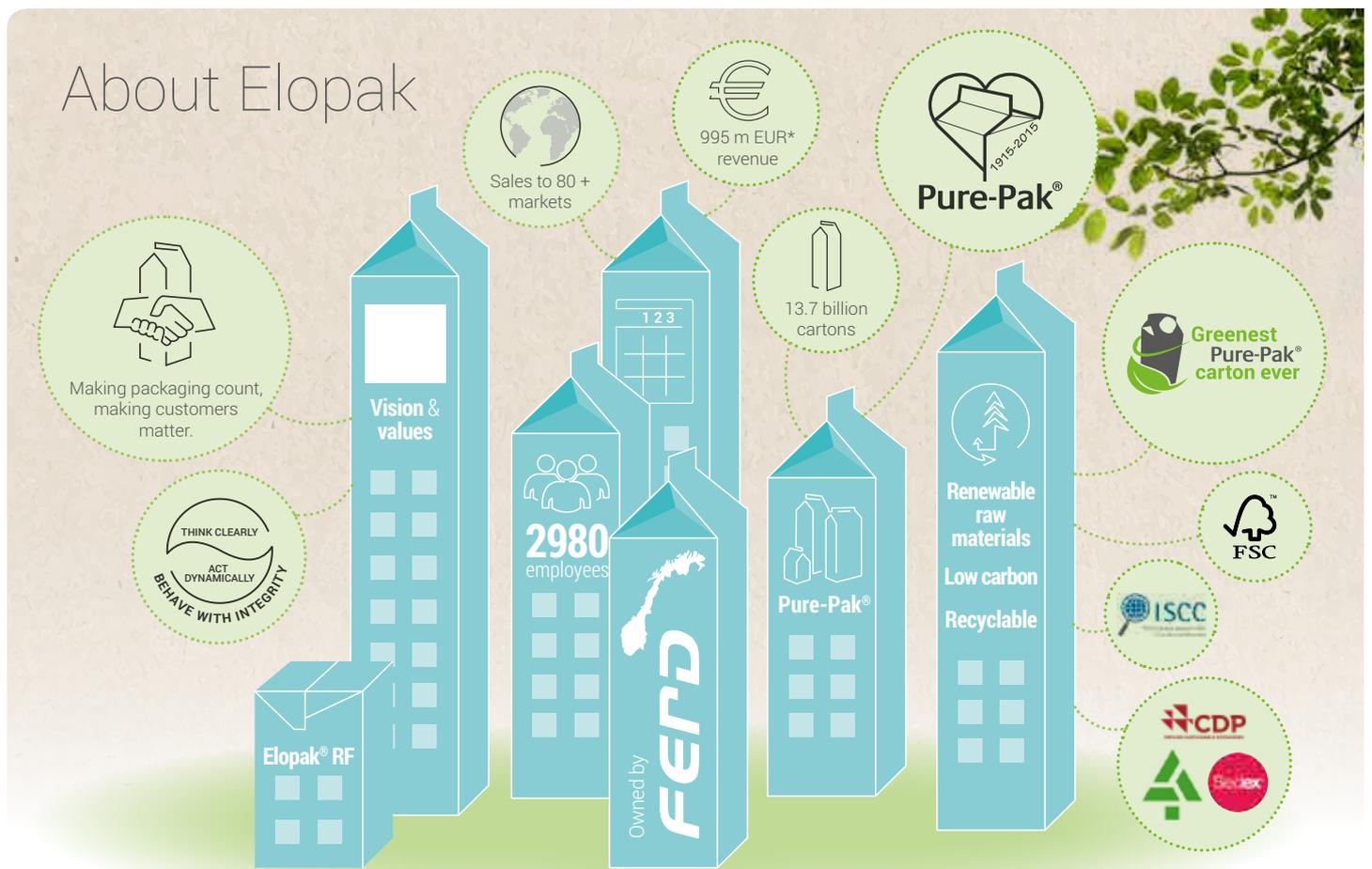
Toward Carbon Neutrality

At Elopak, we believe that the environmental efforts of companies, with regards to climate change, should follow three key steps. Firstly, companies need to focus on direct emission reduction and energy efficiency. The generation of electricity, and the supply of other forms of energy, contributes to roughly one third of all global emissions of greenhouse gases. Therefore, it's critical to reduce emissions from this sector by reducing consumption.

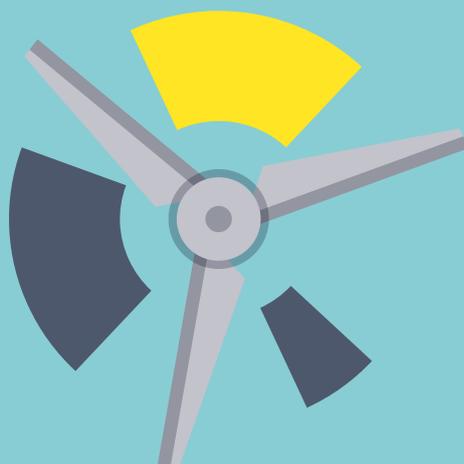
Secondly, it is clear that the world needs to gradually transform the energy system to one based on renewable sources. Increasing the renewable electricity supply is the most important strategy to achieve this. From 2016, Elopak will be supporting this transition by pledging to source only renewable electricity.

After reducing both the consumption and the emission factor of the energy supply, there will still remain residual emissions of greenhouse gases. In Elopak's case, emissions from the utilization of natural gas, emissions from transport and from business travel contribute the largest share of these residual emissions. Within business travel there are still difficulties in finding low carbon alternatives. Thus, Elopak will need to look outside of its own business operations in order to reduce the total emissions to zero. By supporting projects outside of our area of business, and which have real and verified greenhouse gas emissions savings, we can achieve carbon neutrality. And that's where we are headed.

Kristian Hall
Director Corporate Environment

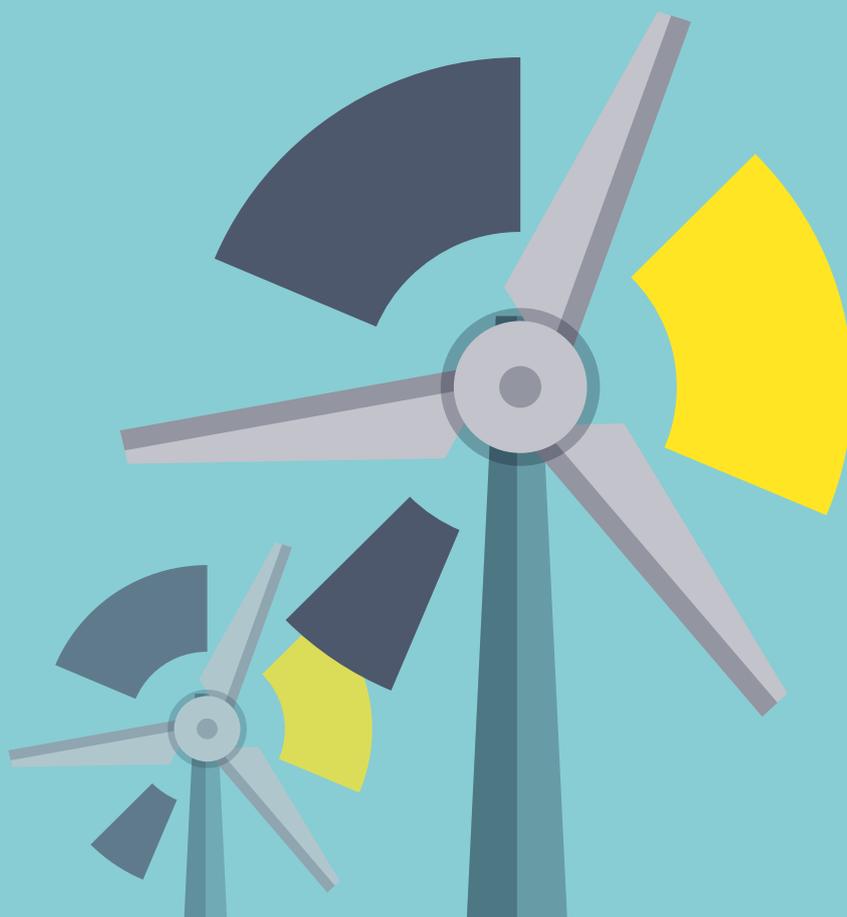


*inclusive 100% of partly owned joint ventures



Powering Up For a Low Carbon Future

In November 2015, Elopak became the first packaging company and the first Norwegian company to commit to the RE100 campaign, where Elopak will introduce 100% renewable electricity into its energy mix worldwide from 2016. What role does renewable energy have in mitigating climate change and how does Elopak plan to do it?





The renewable energy revolution

Electricity supply, and the supply of other forms of energy, contributes to roughly one third of all global emissions of greenhouse gases. Switching this supply to renewables will accelerate the transformation of the global energy market and aid the transition to a low carbon economy. Only by shifting to a sustainable energy supply system involving renewable energy, will we be able to avoid the worst impacts of climate change.

At the Paris Climate Conference (COP21) in December 2015, 195 countries adopted the first-ever, legally binding global climate deal. The Paris Agreement sets out a global action plan to put the world on track to avoid dangerous climate change, by limiting global warming to well below 2°C and endeavoring to limit it to 1.5°C. The Paris Agreement includes measures to review each country's contribution to cutting emissions every five years. Businesses and the private sector are expected to contribute and pull their weight when it comes to emission reductions.

Switching to renewables is not only the right thing to do from a climate perspective. It also potentially saves money on energy and raw material costs, and reduces the risk of volatile energy prices.

There are certainly grounds for optimism when it comes to renewable energy development. During 2015, renewable energy set new records for investment and new capacity added. Investments reached nearly \$286 billion, over six times more than in 2004, and for the first time, more than half of all added power generation capacity came from renewables. However, despite the gains made in the renewable energy sectors and the ambition of the Paris Agreement, emissions from electricity generation are likely to increase in the near future. Bloomberg New Energy Finance's projection for generation emissions is that they will continue to increase for another decade, finally peaking only in 2026¹.

1. 2016. Frankfurt School-UNEP Centre/Bloomberg New Energy Finance. Global Trends in Renewable Energy Investment 2016. Available at <http://goo.gl/1nLlod>

Elopak knows renewables are good for business – switching its electricity supply sends a clear message to customers that Elopak wants to manufacture more responsibly. It's fantastic to see Elopak take the lead on this issue and urge other businesses to step up to the plate.

Mark Kenber, CEO of The Climate Group, behind the RE100 campaign.





About RE100

RE100 is a collaborative initiative of influential businesses committed to 100% renewable electricity, working to massively increase corporate demand for renewable energy. This will accelerate the transformation of the global energy market and aid the transition towards a low carbon economy. RE100 is led by The Climate Group in partnership with CDP, as part of the We Mean Business coalition.



Elopak's renewable electricity commitment

In 2015, Elopak joined the RE100 campaign to show leadership in the area of renewable electricity, to reduce our greenhouse gas emissions and to bring us closer to our Future Proofed Packaging vision of becoming carbon neutral in our operations. This commitment further strengthens the position of our cartons as a low carbon packaging choice for liquid food. By sourcing renewable electricity, by 2016, Elopak will be reducing its greenhouse gas emissions by 40% compared to 2014 emissions (excluding third party transport).

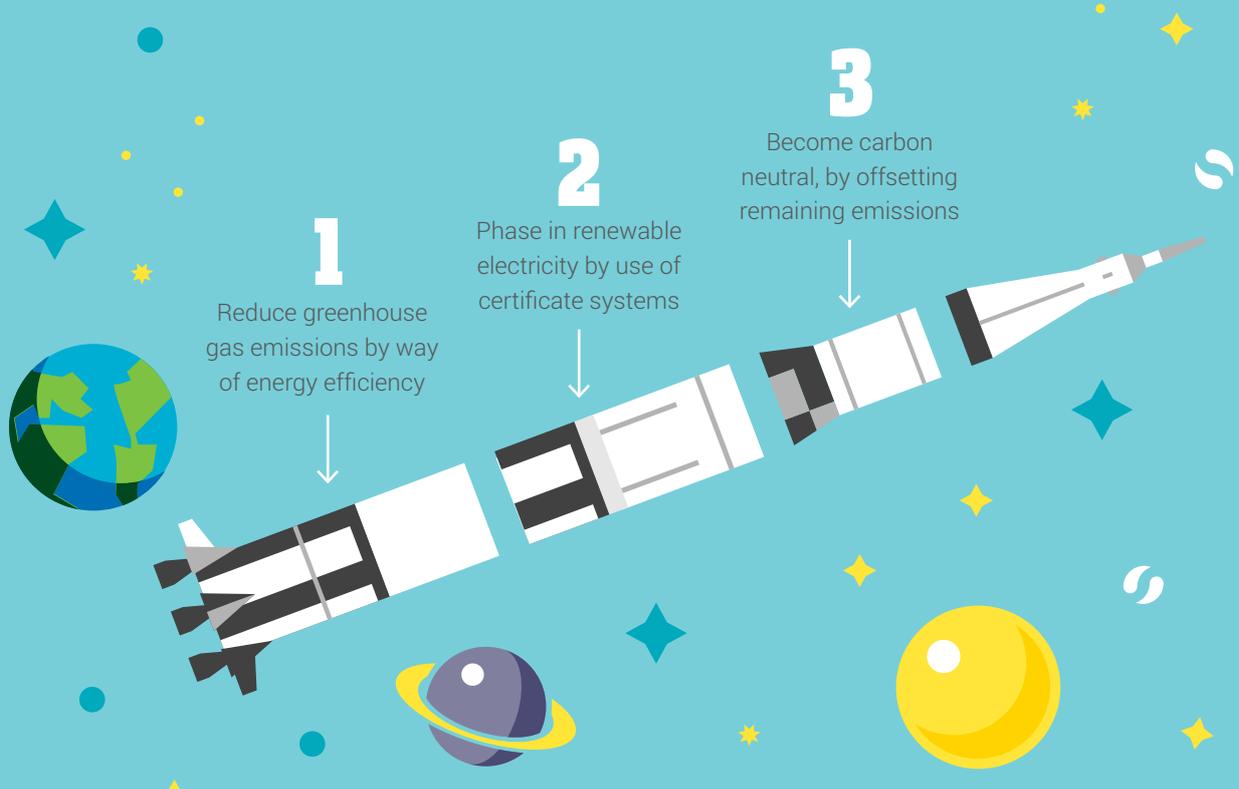
Elopak has been investing in energy efficiency at its plants for several decades, however, there is still a potential for further improvements. Electricity consumption is the largest source of Elopak's greenhouse gas emissions, and by purchasing renewable power Elopak is addressing the largest source of its emissions.

Elopak will utilize Guarantees of Origin certificates (GOs) for business units in Europe, and Renewable Energy Certificates (RECs) for its units in North America. GOs and RECs are systems to trace the source of electricity produced. As electrons cannot be tracked across transmission grids, the only way to distinguish renewable over fossil based electricity, is by way of payments. Elopak is using the official European Energy Certificate System and North American RECs system for this purpose.

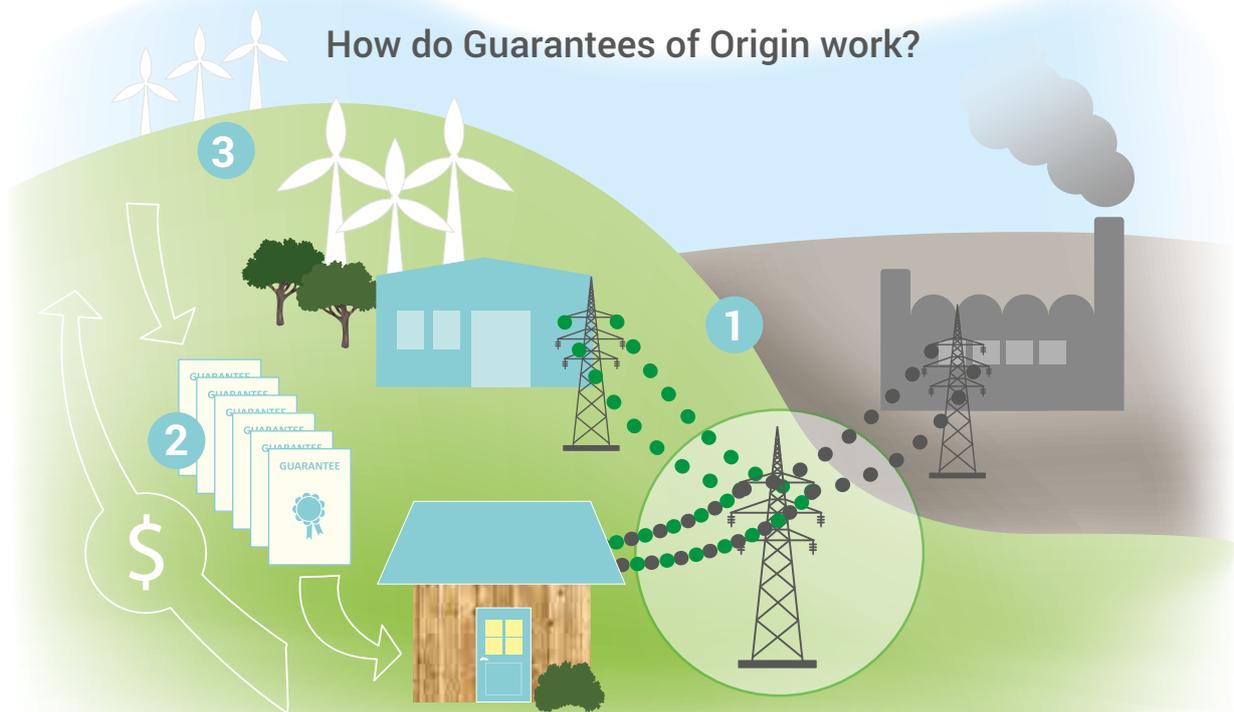
We are covering the electricity demand for all business units where we have a majority ownership, which in practice are all business units except for two joint ventures.

In 2015, Elopak already started phasing in renewable electricity into its operations in Europe and North America. From 2016, renewable power will also be sourced outside of

Elopak's multi-stage greenhouse gas emission reduction process



How do Guarantees of Origin work?



Guarantees of Origin are a system to trace the source of electricity produced.

1. The electrons in the power grid originate from both fossil-based and renewable sources. It is impossible to physically track individual electrons. What can be done, however, is to allocate renewable and fossil-based electricity, by way of the invoice/payment flow.

2. By purchasing Guarantees of Origin, you purchase the right to claim that your electricity is green. A system ensures that double counting is impossible.

3. More renewable energy demand leads to more investment in renewable energy. And less greenhouse gas emissions. The whole system is regulated by the European Energy Certificate System (EECS).

Europe and North America. Renewable electricity purchases are now becoming more common and are incorporated into the updated Scope 2 Guidance of the GHG Protocol, which Elopak uses as a basis for corporate greenhouse gas reporting. It is crucial that reporting standards include the reporting of market mechanisms such as renewable energy certificates, as this encourages businesses to invest in renewable power and to be transparent about their purchases.

Read more about Elopak's RE100 commitment at: <http://there100.org/elopak>

Elopak supplies packaging which is predominantly made out of renewable materials, and it is important for us that also the power supply comes from renewable sources.

Niels Petter Wright, CEO Elopak.



The Road from Paris

– Offsetting as a Positive Step

The Paris Agreement on climate change, forged in December last year and being signed as I write in April 2016, is historic in many ways. Perhaps the most significant is that it represents an end to the big debate about climate change itself. Though the trolls and crazies rage on in the comment sections of online coverage of the issue, it's interesting that hardly anybody showed up to climate change denial events held in Paris during the COP21 talks. To me, that reflects a pragmatic position now taken by a clear majority in professional life. Whatever you may think about climate change personally, everyone from investors to analysts, risk people, marketers and – finally! – politicians are all responding in such a way that the business case for action gets stronger every day.

The question is now not whether action is worthwhile, but what is the best approach, and where does the greatest return lie, from a business perspective. Carbon impacts often lie somewhere else in the value chain than the things a business controls directly – either amongst suppliers or with end users of products. Collaborating and innovating to reduce these impacts is a big part of the future – and there's growing evidence that analysts and investors want to see companies on top of this opportunity agenda as well as their own carbon risk. But it's the sphere that a business controls directly – its operations and manufacturing of products – where most of the tangible costs and savings lie. Here, a carbon 'hierarchy' – starting with avoiding emissions through innovation, then improving efficiency, and fi-

nally mopping up any residual emissions through offsetting – is increasingly common practice for companies taking their approach seriously.

Offsetting, though, has had a mixed reputation in the past, and a range of questionable schemes made it easy to criticise offsetting as just a way of shuffling the problem around. As a result, offsetting is sometimes seen as tactic of last resort rather than a positive strategy in itself. But doubts about process don't undermine the fundamental argument for offsetting: that it gives emitters something positive to do about the emissions that it's not sensible or feasible to deal with any other way. As the credibility and transparency of offset schemes improve, business confidence in it is growing. Whether buying off-the-shelf offsets from existing schemes, getting projects designed to suit their needs, or actually buying up land to plant trees, companies from Avis to Accor to Apple are using offsets as part of their carbon management programs. In the post-COP21 world, when so much is expected of business to address climate change, offsetting is something companies can

Carbon impacts often lie somewhere else in the value chain than the things a business controls directly – either amongst suppliers or with end users of products.

Ben Tuxworth, Director Anthesis



Nations Unies Conférence sur les Changements Climatiques COP21/CMP11 Paris, France



Photo: UNFCCC

start immediately and also helps bring the cost of carbon into the financial equation. Getting a handle on these costs – and discovering that offsetting is the most cost-efficient way to deal with emissions – can help reframe sustainability from a huge and intractable challenge to something more manageable within normal business practice.

So whilst it's true that keeping focus on 'upstream' approaches to carbon management is commercially vital, it's also important to see offsetting as so much more than a necessary evil. Done well, offsetting and innovative approaches to carbon finance can deliver value well beyond the molecules of CO₂ avoided. Increasingly, offsetting schemes are being designed to do the carbon job but also deliver a range of social and financial benefits, which no other form of carbon management can secure. 'Co-benefits' as they are called can include employment, education, women's empowerment, fresh water, clean air, infrastructure development and economic opportunity in places where such things are scarce and badly needed.

For companies such as Elopak these co-benefits align with a long-held ethos and strategy for social and environmental

sustainability. Measurable positive impacts for people – wherever they may be – mean the investment Elopak is making in offsetting may well be just as beneficial as anything they can do to tackle carbon within the business. More than that, the co-benefits humanize carbon management, connecting an invisible threat that many struggle to imagine with real lives and tangible progress.

Above all, by connecting an international packaging company with communities in less developed countries, offsetting reminds us of something true about sustainability – that it must be achieved at the level of a global system which links us all. As companies move on from the limited project of CSR – which ends at the factory gate – to the much bolder pursuit of sustainability, this reconnection to the world through offsets helps remind us of what we are trying to achieve and the true size of the prize.

Ben Tuxworth

Director



Environmental Highlights 2015

RENEWABLE RAW MATERIALS



SUSTAINABLE ENERGY

170 million
cartons sold featuring renewable PE coating¹

cartons sold featuring renewable PE coating¹

88 million

closures sold featuring renewable PE¹



Elopak Group global FSC™ sales

(percentage of sales)



100%

of Elopak's paperboard sourced from verified legal and acceptable sources



100%

of Elopak's production units FSC certified²

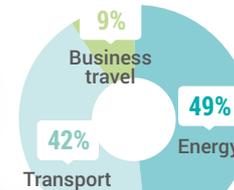
20%

reduction of carbon footprint for a carton with closure when using renewable PE

Elopak Group greenhouse gas (GHG) emission sources

(percentage of total)

(percentage of total)



RE 100

Elopak became the first packaging company and the first Norwegian company to join the RE100 campaign, committing to sourcing 100% renewable electricity from 2016 onwards

Elopak Group GHG emissions per produced carton

(g CO₂e)



49%
reduction

In 2014 Elopak began phasing in renewable electricity

Elopak Group GHG emissions

(tons CO₂e)



40%
reduction

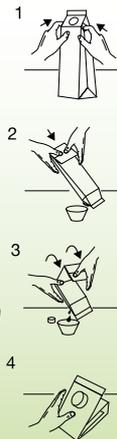
TOTAL RECYCLING



An average of **35%** of Elopak cartons sold in Europe and North America were recycled

98% of Elopak's internal paperboard and carton waste recycled

43% average beverage carton recycling rate in Europe



CUSTOMER OPERATIONS



ELOPAK E-PS120A

Elopak's new aseptic filling machine E-PS120A reduces energy consumption by at least

25%

when compared to older, comparable machines

SUSTAINABLE LOGISTICS



Elopak's 2015 emissions related to third party transport³ is:

28 124 tons CO₂e



ELOPAK
Together we make packaging work

¹ Contributing to responsible sourcing of bio-based materials in a mass balance system. www.iscc-system.org

² The Forest Stewardship Council™ (FSC™). FSC™ C081801. Look for FSC certified products – the mark of responsible forestry. www.fsc.org

³ Third party transport: Scope 3 emissions in GHG Protocol covering transportation services purchased by Elopak



Elopak's Future Proofed Packaging Strategy



TURN OVER



PILLAR 1: Renewable Raw Materials

In 2015, Elopak sold over 170 million cartons and almost 88 million closures featuring renewable polyethylene (PE), marking a substantial growth since first launching renewable PE in 2014. Switching to using renewable PE in a fresh milk carton reduces CO₂ emissions by 20% compared to a standard Pure-Pak® carton. In 2015 we also reached our industry commitment to source 100% of our wood fibers from documented legal and acceptable sources. 31% of our global sales were FSC™ certified cartons.

The introduction of renewable PE has brought Elopak much closer to our vision of producing cartons made from 100% renewable resources. Cartons consist of mainly paperboard and polyethylene, which means that our most common cartons already can be claimed as being 100% based on a renewable raw material supply.

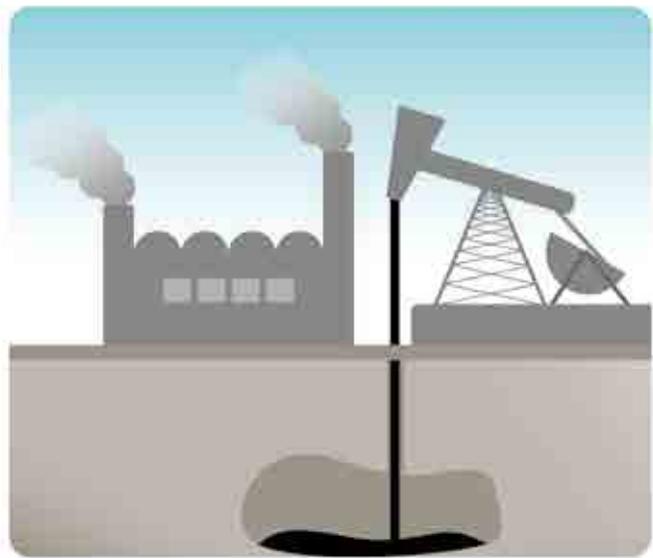
Why is renewability important?

Society is to a great extent relying on scarce resources that are often not re-used or recycled. Resource extraction and depletion threaten ecosystems and livelihoods all over the world. Switching to renewable raw materials is important to ensure resource availability for future generations. For Elopak, it is not only important that the resources are able to renew themselves, but also that they are actually being renewed. This is assured through certification systems.

Check out the video on our renewable PE offering!



Renewable vs. non-renewable



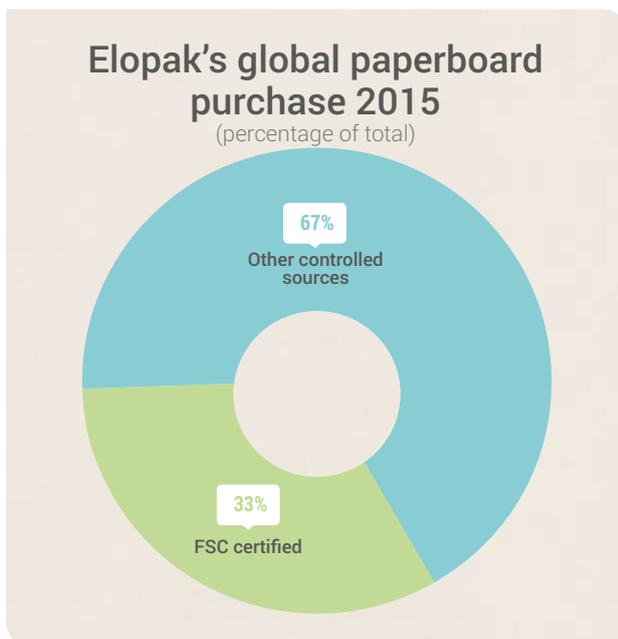
A renewable resource is a natural resource which can replenish with the passage of time, either through biological production or other naturally recurring processes. In contrast, non-renewable resources, such as petroleum and natural gas, are limited and will be depleted.

Paperboard

Elopak cartons consist mainly of paperboard (on average 85%). Paperboard is made from wood, which is a naturally renewable resource. However, with the global threat of deforestation, it is of the utmost importance to ensure that the forests are being managed responsibly and hence being renewed. Elopak sources all of its wood fibers from documented legal and acceptable sources using the standards of the FSC certification system. This ensures that forests are responsibly managed, that biodiversity is protected and that forests are replenished sustainably.

Sales of FSC certified cartons have steadily increased year on year since we began with FSC certification back in 2010. In 2015, Elopak reached a sales volume of 4,3 billion FSC certified cartons, and we aim to increase the number of certified cartons in the coming years.

Responsible sourcing is crucial in order to secure Elopak's purchase of fibers and during 2015, Elopak further strengthened its internal procedures for global paperboard sourcing. Throughout 2015, 100% of our global board purchased originated from FSC certified or other controlled sources, hence fulfilling the first part of our industry commitment. All of Elopak's production plants, including joint ventures, are FSC certified, fulfilling the second part of our commitment with our industry partners.



Industry-wide commitment to global sourcing of wood fiber from legal and acceptable sources

ACE – The Alliance for Beverage Cartons and the Environment – provides a European platform for beverage carton manufacturers and their paperboard suppliers to benchmark and profile cartons as renewable, recyclable and low-carbon packaging solutions.



ACE members are the converters Elopak, Tetra Pak and SIG Combibloc, and board suppliers Stora Enso and BillerudKorsnäs. ACE members are committed to globally sourcing wood fiber that is traceable to legal and acceptable sources, using processes that have been independently verified. In detail, the commitment includes:

- Sourcing 100% wood fiber from legal and acceptable sources by 2015
- Securing chain-of-custody certification for all liquid packaging board mills by 2015
- Securing chain-of-custody certification for all beverage carton manufacturing plants by 2018

What do we mean by legal and acceptable sources?

By "legal and acceptable" or "controlled sources" we mean wood fiber that is verified to NOT come from:

- Illegally harvested wood
- Wood harvested in violation of traditional and civil rights
- Wood harvested in threatened high conservation value forests
- Wood harvested in forests being converted to plantations or non-forest use; and
- Wood from forests in which genetically modified trees are planted.



The mark of responsible forestry

THE FOREST STEWARDSHIP COUNCIL™ (FSC™)

is an independent, non-profit organization devoted to encouraging the responsible management of the world's forests. FSC sets high standards that ensure forestry is practiced in an environmentally responsible, socially beneficial, and economically viable way.

Polyethylene

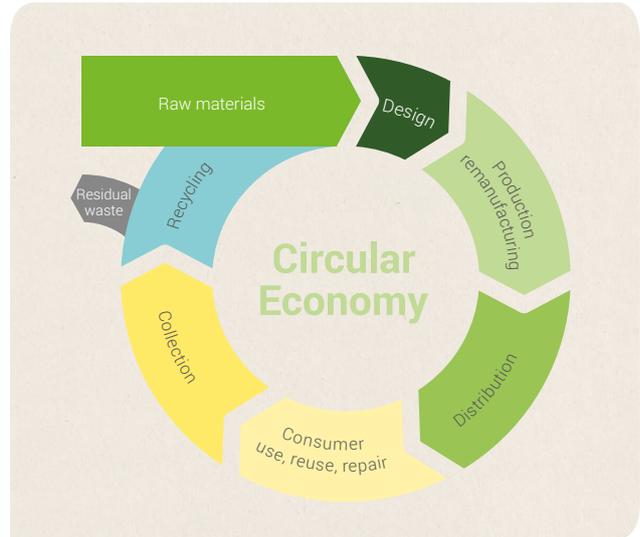
Elopak's cartons consist mainly of paperboard. However, all of our cartons also have a thin layer of plastic (polyethylene, or "PE"), a liquid barrier which protects the product contained inside. In addition, the closure is made from polyethylene. By weight, PE represents the second largest part of the carton. In 2014, Elopak successfully launched cartons and closures featuring PE from renewable sources, replacing the traditional fossil-based PE. Several customers have welcomed our renewable PE offering, and sales of certified renewable cartons and closures have increased steadily throughout the year.

Elopak's renewable PE is certified through the entire value chain by the International Sustainability and Carbon Certification system (ISCC PLUS). This ensures sustainable and responsible sourcing of renewable materials.

Most of the renewable plastics on the market today are made from crops, so-called first generation feedstock. When the crop is grown sustainably, this is clearly preferable to fossil based polymers. However, it cannot be the only solution when reducing dependency on fossil resources, as this would require far too much arable land.

The renewable PE used by Elopak is based on a raw material supply of biomass from **second generation feedstock**. The feedstock is bi-products from food production sourced

regionally within Europe. By converting waste into a resource we are contributing to the Circular Economy.



The renewable polyethylene is produced in exactly the same way as regular oil-based polyethylene; the only difference is the raw material input. Hence, there are no physical or technical differences between fossil-based PE and the renewable PE. Cartons based on renewable PE are fully compatible with all current filling systems and food regulations.



ISCC stands for "International Sustainability and Carbon Certification" and is a world-wide applicable and acknowledged certification system for any kind of bio-based feedstocks and renewables. ISCC PLUS is specific for food and feed products as well as for technical/chemical applications (e.g. bioplastics) and applications in the bioenergy sector (e.g. solid biomass).



Traditional plastics Fossil-based



- Depletion of resources
- Economic volatility

- **Non renewable**
- **High GHG emissions**

1st generation renewable Crop-based



- Use of agricultural land
- Currently not available from Europe

- **Renewable (sustainable)**
- **Lower GHG emissions**

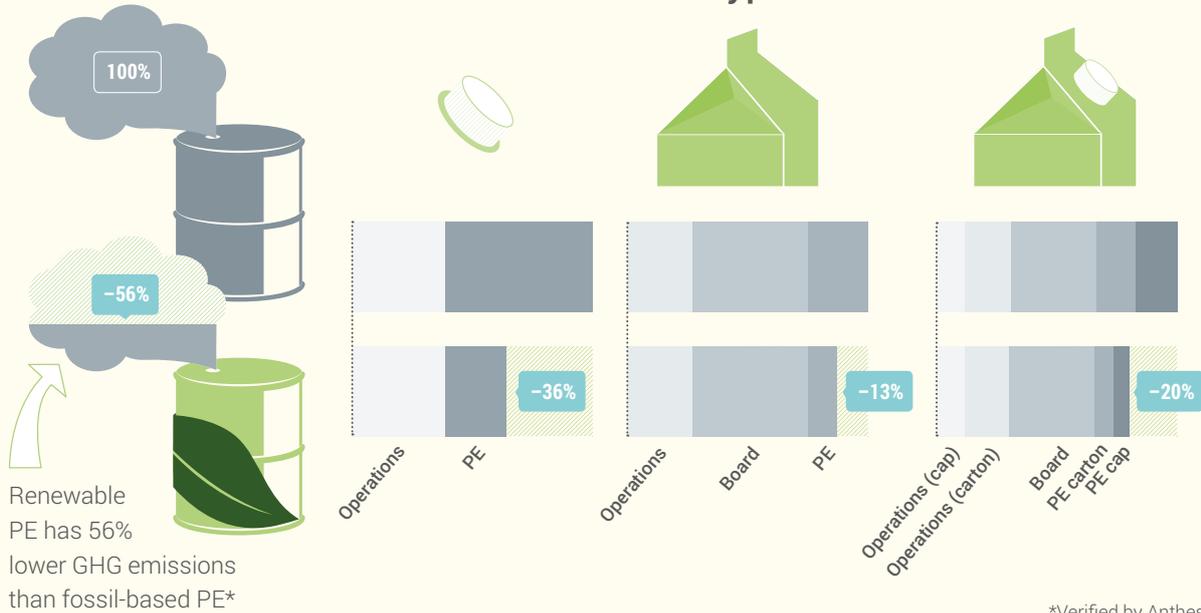
Elopak solution

2nd generation renewable Organic residue-based



- Contributing to a Circular Economy
- Sourced within Europe

Reduced GHG emissions for a typical milk carton



GHG emission reduction

An additional benefit of renewable materials is that greenhouse gas (GHG) emissions from extracting and producing renewable resources are significantly reduced compared to fossil-based resources. In 2015, Elopak developed a tool to illustrate the CO₂ footprint of different carton types, including a comparison when using renewable PE¹. Elopak's customers receive a documented carbon footprint for their specific carton. This helps in documenting, calculating and defining areas to reduce the total footprint.

The GHG emission reduction is related to lower emissions from the production of diesel (fossil based vs. renewable diesel). There is further potential for carbon capture in the carton, a so-called biogenic carbon effect. This means that carbon from the atmosphere is locked into the biomass, and consequently into products made out of the biomass, and thus kept away from the atmosphere for a certain amount of time. The amount of time is dependent on the waste management in the various markets. Because of this, biogenic carbon effect can only be accounted for when a full Life-Cycle Assessment (LCA) is carried out, including end-of-life of the finished products. In the calculations presented in this report, the additional biogenic carbon effect is not included. Including it would give an additional potential saving of 29% per carton, when assuming a European average end-of-life scenario.

¹ The methodology used to make the tool is in line with the ISO standards for Life Cycle Assessments (ISO 14040 and 14044). The Product Category Rules for beverage cartons are followed where relevant to the carbon footprint calculation methodology (PCR Beverage Cartons 2011:04 Version 1.0, developed in accordance with ISO 14025:2006). The tool has been verified by Anthesis.

Carbon sequestration potential renewable PE

Renewable PE has 56% lower GHG emissions than fossil-based PE, and an additional carbon sequestration potential of 3,14 kg/ kg PE (locking CO₂ from the atmosphere into the product)



The carbon sequestration effect in this diagram by necessity takes into account the end of life impact (cradle to grave). Thus, two separate scopes are considered, which means that the diagram above can only be used for illustration purposes.

Pillar 1: Renewable Raw Materials

Mass balance principle

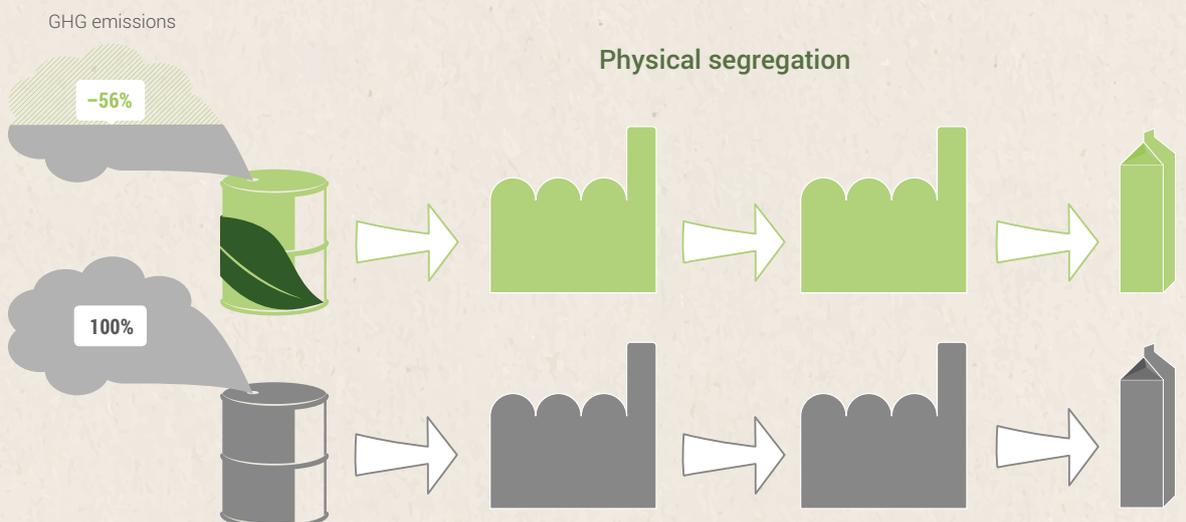
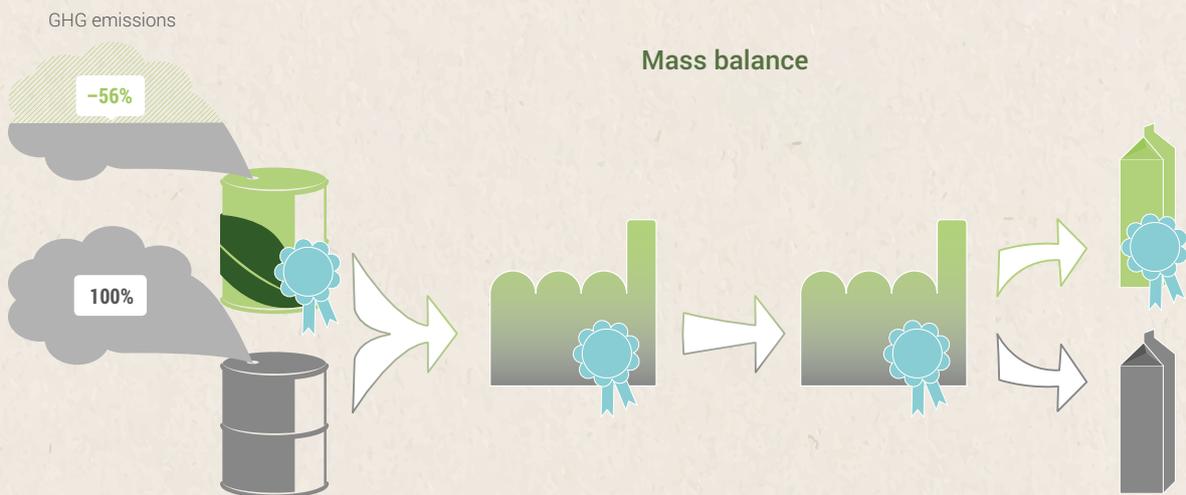
When producing renewable polymers, two different routes can be followed:

1. A mass balance system utilizes existing plants, and mixes the renewable and the original/existing raw materials.
2. A physical segregation system that requires the building of new factories or production lines to enable the production of renewable raw materials.

Elopak's renewable PE is using a mass balance system, which means there is a certified, guaranteed link between the input in to a process and the output from the process. For each ton of certified material put into production, an equivalent amount of the fin-

ished product can be claimed as certified. Within the production unit, products can be mixed. A credible third party audited certification system is important to secure the balance between input and output. The mass balance system is beneficial as there is no need to build separate plants or production lines, and it allows for a gradual increase of renewable material depending on the demand. It is also more cost-efficient and reduces the barrier to introduce new technologies. Mass balance is widely used and accepted by various certification systems.

The environmental benefits of using renewable raw materials are the same regardless of which of these systems are used.





Other materials

Elopak is focusing on increasing the renewability of the PE barrier which makes up the second largest portion of raw materials after paperboard. In some cartons there are additional oxygen and light barriers such as aluminum and EVOH. In addition, there are tie layers with the purpose of binding the various materials together, depending on the product type and purpose. Since PE is the main

component, and the majority of our products only contain paperboard and PE, the main focus has been on finding alternatives to fossil based PE. We have engaged in various projects with research organizations and suppliers to find alternatives to the oxygen and light barriers in our cartons, and this will remain a focus going forward.

International recognition for environmental innovations

In 2015 Elopak won several awards for environmental excellence:



Left: Elopak won the PepsiCo France "Performance with Purpose" Environmental Trophy for our Greenest Pure-Pak® ever with renewable PE, which contributes to a Circular Economy.

Below, left: Starpack Silver Winner 2015 (UK) for Pure-Pak® Sense carton with renewable PE.

Below, right: The German Packaging Institute (dvi) awarded Elopak's Pure-Pak® carton made of 2nd generation renewable PE as one of the most innovative packaging developments in 2015.



2020 VISION:

No oil
No foil



PILLAR 2: Sustainable Energy



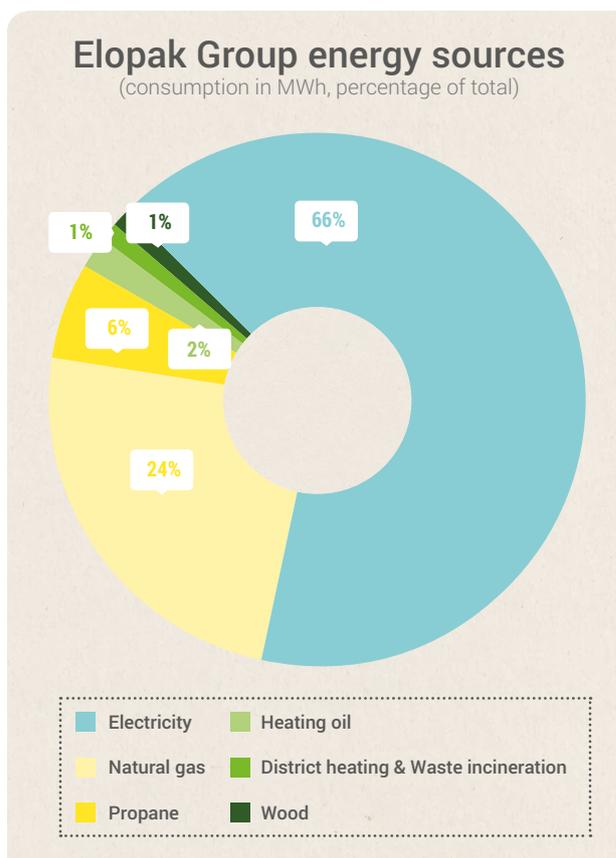
Simply put, emissions of greenhouse gases from energy use is the product of two factors; the consumption multiplied by the emissions factor of the energy source. To reduce emissions from the use of energy, Elopak works on both of these factors.

Elopak has been investing in energy efficiency projects for decades. There is a network of energy efficiency experts between our different production facilities, where best practice is being shared. Here are some examples of energy efficiency projects that have been implemented in recent years:

- Installation of energy management systems (EMS) and energy metering systems, to enable detailed tracking of our energy consumption for individual machines and other equipment
- Transition to LED lighting
- Installation of free cooling, where outside winter temperatures are used to lower the temperature of cooling water, and avoid the increased consumption of cooling machines
- Reusing the energy contained in heated air in our factory halls, for the purpose of heating office spaces

To reduce the emission factor of our electricity supply means replacing fossil based electricity with renewable based. Companies can either invest in new renewable generation capacity directly, or they can source their renewable electricity by way of certificate systems. Elopak has chosen the latter approach. As described in the article earlier in this report, Elopak joined the RE100 initiative in 2015. From 2016, all our electricity supply (excluding two joint ventures where we do not have majority ownership) will originate from renewable sources.

The European Energy Certificate System (EECS) is the official European system for Renewable Energy Certificates (RECs). The system originates from the European Renewable Energy Directive (Directive 2009/28/EC), and was created to enable cooperation within renewable energy across borders. The system works such that all producers of renewable electricity are granted an amount of certificates corresponding to their actual production (in MWh). They can then sell these certificates, called Guarantees of Origin (GO), to consumers of electricity (businesses and end-consumers). When a GO is used by a consumer, it is



cancelled in the system to prevent double counting (it cannot be purchased or used by other parties). This system has several similarities to the mass balance system described earlier; it is basically mass balance for electricity. Every country participating in the system has a central organization called an Issuing Body, which oversees the national markets for GOs. In addition, the entire European system is overseen by the Association of Issuing Bodies. In the case of North America, RECs are certified according to the Green-e® Energy, which is the leading independent certification and verification program for renewable energy and has to meet minimum environmental and consumer protection standards.

2020 VISION:

100%
carbon
neutral

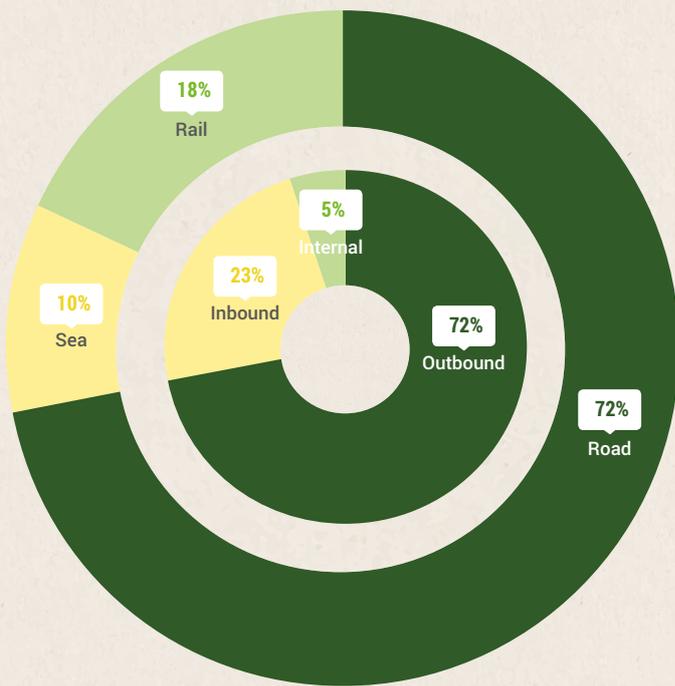


PILLAR 3: Sustainable Logistics

Elopak has expanded its environmental reporting and in 2015, included emissions related to transport (Scope 3). As other emissions are being reduced, transport emissions are making up a larger part of Elopak's total emissions.

2015 Elopak Group transport emissions

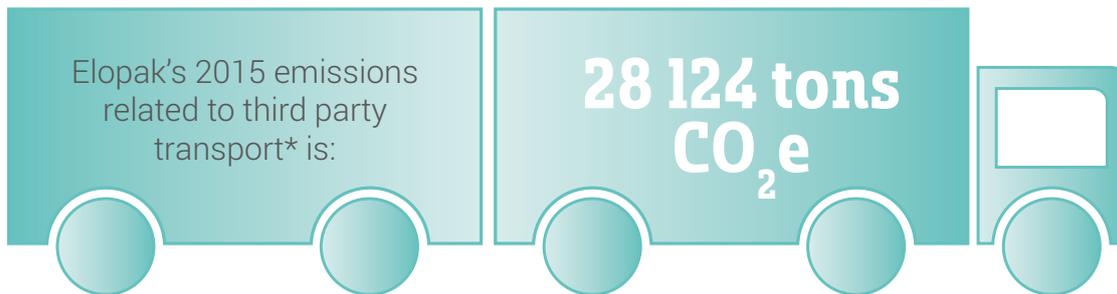
28 124 tons CO₂e



In 2015, Elopak started tracking its global Group emissions from transporting raw materials, semi-finished and finished products. The emission estimate covers third party transport, Scope 3 in the GHG standard, as Elopak does not run transport operations by itself. It covers transport from supplier's gate to customer's gates, and accounts for the transport purchased by Elopak, and thus under its influence. The estimate is split into inbound, internal and outbound transport covering production related goods, and manufactured and sold products. The Elopak transport emissions are estimated to be 28 124 tons CO₂e.

Tracking transport emissions is a comprehensive task due to a variety of factors such as complex supplier and customer networks, large numbers of different transport routes, use of various transport types, the use of various third party transport suppliers, and a lack of harmonized tracking systems across sites. As Elopak's other emissions are being reduced, transport emissions account for a significant part of the total emissions, approximately 42%.





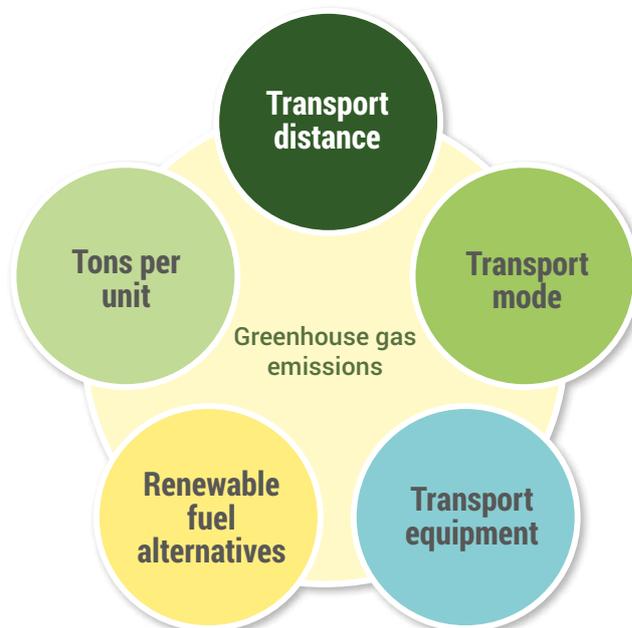
*Third party transport: Scope 3 emissions in GHG Protocol covering transportation services purchased by Elopak

How to reduce environmental impact from transport?

All of Elopak's transport operations are outsourced to external suppliers. We are constantly working to cooperate with and influence our transport suppliers to find the best solutions from an environmental point of view, in order to minimize emissions. Elopak has identified various key areas to achieve this. We are continuously working on improvements and the evaluation of transport in respect to these focus areas.

- **Transport distance:** considering geographical aspects in supplier and allocation decisions
- **Transport mode:** evaluating choice of transport mode and switching to sea and rail transport where possible
- **Transport equipment:** set and follow up requirements for transport suppliers on type of transport equipment (e.g. EURO class for trucks)
- **Renewable fuel alternatives:** evaluating and pushing for transport suppliers to use more environmentally friendly fuel alternatives
- **Tons per unit:** loading optimization through order size, number of pallets/reels per shipment and number of cartons per pallet

In Europe including Russia, we have set the requirement that trucks used for road transport in all markets must meet the EUR class 4 emission standard as a minimum. In addition, suppliers must undertake to, where possible, use vehicles conforming to EUR class 5 or higher in order to reduce other emissions, such as NO_x. The 2014 transport evaluation showed that almost 70% of the available truck fleet is EUR class 5 or higher.



Transport emissions estimate and reporting going forward

Elopak is constantly improving its environmental reporting tools. For emissions from transport operations, we are aiming to automate the collection and evaluation of the emission data. This will improve and support analysis and decision-making with regard to environmental, operational and strategic performance. As a first step, we have during 2015, become a member of Network for Transport Measures (NTM). In addition we have initiated a pilot project to evaluate automatic emission data collection from transport operations.

2020 VISION:





PILLAR 4: Customer Operations

Elopak has several hundred filling machines deployed at our customers' sites, and we are continuously working to improve the performance and efficiency of these machines. The launch of our new E-PS120A for Pure-Pak® Aseptic cartons was a step in the right direction. This machine features several characteristics that will reduce the consumption of energy, time, chemicals and water used in the operation of the machine.

The filling machine platform for aseptic Pure-Pak® cartons features a unique modular design for exceptional flexibility in installation, operation and maintenance. With an integrated cap applicator the machine requires less floor space, and minimum manpower due to semi-automatic carton feeding, high in-machine storage and high buffer capacity. The new machine has a smaller aseptic chamber unit which guarantees a fully aseptic performance with a well proven H₂O₂ 35% vapor sterilization system. The cap-welding is done using ultrasonic energy, bottom sealing is improved and top sealing is inductive.

when using the new aseptic machine compared to the previous generations of aseptic filling machines¹.

Work is on-going to optimize the cleaning and sterilization processes of selected filling machines. A reduction in cleaning time, water and chemical consumption can be expected by installing logging equipment, improving communication between machine and cleaning unit, and by challenging current cleaning procedures. Some of this work needs to be done in the field in close cooperation with our customers.

When calculating the above improvements to CO₂-footprints, we see a reduction in CO₂ emissions of at least **25%**

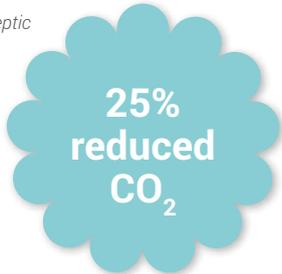
¹ Calculations are internal and based on electricity consumption during production and cleaning. Variances may occur due to different machine settings and speed.




Elopak's new aseptic filling machine E-PS120A reduces energy consumption by at least **25%** when compared to older, comparable machines

Elopak's newest filling machine E-PS120A for Pure-Pak® aseptic cartons.

2020 VISION:





PILLAR 5: Total Recycling

By promoting beverage carton recycling and turning used cartons into new materials and products, Elopak is helping to create a more Circular Economy. In addition, Elopak is constantly working towards reducing its internal waste, thus improving resource efficiency.

Recycling is of paramount importance, both when it comes to our internal company waste and when it comes to the end-of-life considerations of our cartons. In a closed-loop, Circular Economy, there should not be an 'end-of-life' of products and materials, but ideally, secondary materials for new products and applications. We have therefore set challenging targets for waste reduction and household (consumer) recycling. Within Elopak's premises, we aim for 100% recycling of our internal waste. For the recycling of our used beverage cartons, we are aiming for a 50% recycling rate by 2020.

Recycling of household waste

Elopak prides itself on offering packaging which is made from low carbon, renewable resources, which are recyclable. Consumers expect packaging to be recyclable and also recycled. There are many environmental benefits to recycling beverage cartons. These include the ability to produce new products from recycled cartons, thus enabling the efficient use of raw materials by extending their life. Furthermore, recycling reduces CO₂ emissions and diverts valuable materials from landfill.

All Elopak cartons are fully recyclable.



How are beverage cartons recycled?

All the materials which make up beverage cartons are fully recyclable once collected. First, there is a water-based, closed-loop process called re-pulping, which allows the paperboard to be separated from the non-fiber layers. The virgin fibers in the paperboard provide the stiffness and lightness of the cartons, and are high quality fibers which can be recycled up to 7 times. These recycled fibers are used to make secondary packaging, such as cardboard boxes, packaging for consumer goods and paper cores.

The recycling and recovery process of the non-fiber components can vary depending on process infrastructure and country. Some recyclers use the polymers to power the recy-

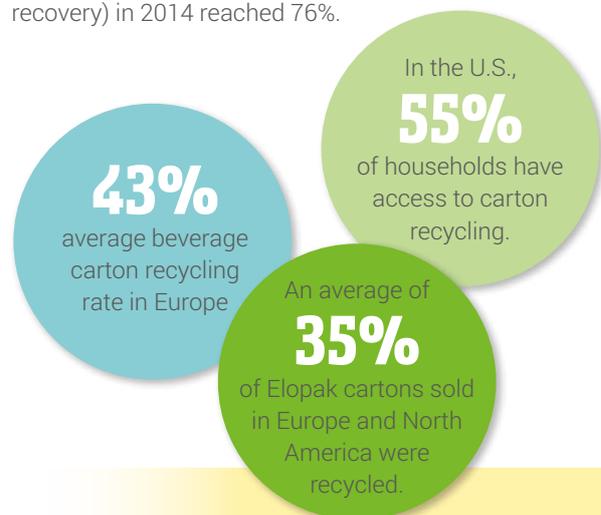
cling plants themselves, replacing the need for fossil fuels. The polyaluminum mix (called PolyAl) can also be used on its own as a new, innovative material with unique properties (see case study on next page).

The mix can also be separated, and the polymers can be used for new plastic products such as garden furniture. The aluminum can then be sold as secondary material and used in a number of industrial applications, replacing virgin aluminum and thereby contributing to resource efficiency.

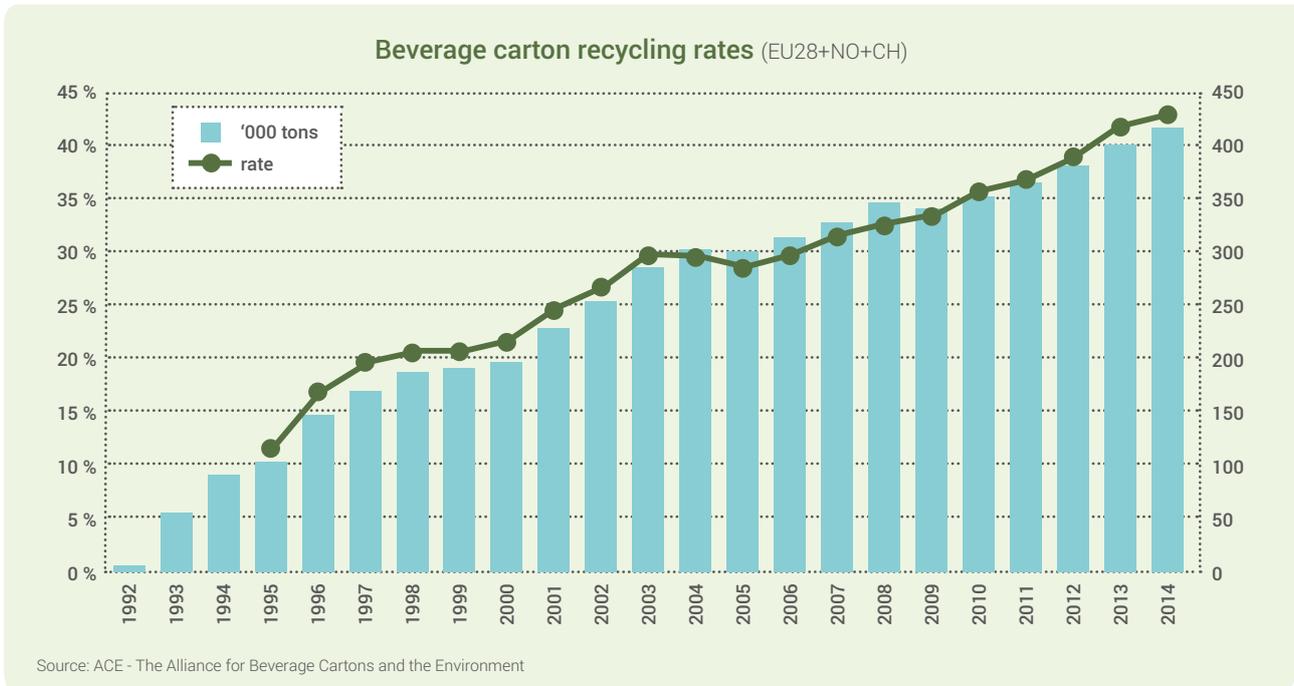
Recycling progress

The beverage carton industry continues to support recycling through promoting innovation in recycling solutions, stakeholder engagement and collaboration. In some European countries, we are also active in the national recycling organizations. Elopak endeavors to increase beverage carton collection and recycling rates in the markets in which we operate.

The beverage carton recycling rate in Europe has been steadily increasing over the past 20 years. In 2014, the recycling rate in Europe rose to **43%**, which amounts to 420 000 tons of recycled cartons. This is a 70-fold increase on 1992 figures, when just 6 000 tons were recycled. The total recovery rate (recycling and energy recovery) in 2014 reached 76%.



PILLAR 5: Total Recycling



Industry cooperation to promote beverage carton

Cartons are the renewable, low-carbon and recyclable packaging solution. Beverage carton manufacturers and board suppliers work together to demonstrate that beverage carton packaging is the smart green choice today and in the future. Some examples of industry cooperation of which Elopak is an active member in North America and Europe include:



Recycling case study: The PolyAl Challenge

In 2015 in France, collaboration between the national beverage carton association (Alliance Carton Nature, of which Elopak is also a member) and ENSCI – Les Ateliers, a prestigious industrial design school, brought together a team of talented design students. They were tasked to explore the properties of PolyAl (a mixture of aluminum and polymers from the used cartons) and to create new designs and product ideas out of this unique material. This symbiotic collaboration between industry and design brought about new ideas on how to turn this useful secondary raw material into a material in its own right.

The material is considered by designers as a promising and innovative material to work with, in particular because of its functional characteristics: malleable, light, resistant, and waterproof.



Above: Renowned French designer Fabrice Peltier, jury-member of the 'PolyAl Challenge', with one of his own PolyAl creations. Photo credit Véronique Huyghe



Transforming recycled beverage cartons into innovative designs in France



The PolyAI Challenge.
Polytomettes. Design: Chloé Maillot, Clémence Plagnard, Mélissa Portilla.
Photo: Véronique Huygue



The PolyAI Challenge.
Le son de la brique. Design: Emma Lelong, Louise Raguét, Florent Revellin.
Photo: Véronique Huygue

Recycling of Elopak's internal waste

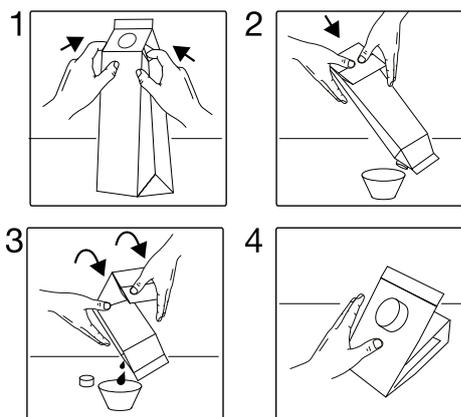
Most of Elopak's internal waste is paperboard and carton waste from the production (both coating and converting processes). In 2015, **98%** of this paper waste was recycled. Elopak has an internal program, **Elovation**, where focus on

waste reduction has led to reduced waste rates at our manufacturing plants. By carefully tracking waste amounts and internal waste rates, this has led to improved efficiency, quality and lower costs, in addition to the environmental benefits.



The Pure-Pak® Sense carton – packaging solution which helps reduce food waste

Food waste is a pressing issue, and with the help of innovative design Elopak has made it easier for consumers to reduce food waste. Elopak's Pure-Pak® Sense carton reduces food waste by having "easy-to-fold" lines which makes it easier to squeeze out more of the product, thus reducing food waste and decreasing waste volume when folded.



2020 VISION:

Zero waste



PILLAR 6: Culture and Governance

Elopak's *Future Proofed Packaging* strategy can be successfully implemented only through close cooperation between the various business functions within the company, and with the dedication and know-how of many Elopak employees. Within this strategy we are also working across the entire value chain, from raw materials to end-of-life, to ensure minimum impact on the environment.

Elopak's value chain approach

Elopak is committed to conducting business in a responsible manner and to account for social and environmental aspects when managing our relationship with our suppliers. Therefore, Elopak has during 2015, made efforts to increase focus on Responsible Sourcing. Elopak has established and started to implement an extensive Global Supplier Code of Conduct (SCoC) with the ambition to drive improvement in the value chain. The SCoC is a core document outlining the minimum standards Elopak requires in addition to applicable laws and regulations that its suppliers must comply with when doing business with Elopak. The SCoC is based on the ten principles of the UN Global Compact, the UN Declaration of Human Rights, and core ILO (International Labor Organization) conventions. Implementation of the SCoC will occur during 2016.

Elopak is reporting to the world's largest database for environmental information, CDP (formerly the Carbon Disclosure Project), as part of the Supply Chain program. Elopak also asks its key suppliers to report on how their products and services impact the emissions from the value chain. In this way, suppliers are being followed up on their environmental progress, so that we in turn can reduce the impact of our cartons, which are the ideal low carbon packaging solution for liquid food.

Reducing travel and increasing collaboration

Business travel at Elopak encompasses flights and business car travel. By having advanced video conferencing capabilities in place, many meetings can take place virtually. During 2015, video conferencing capabilities were further improved and rolled out across the company, allowing for increased global collaboration and dynamic virtual meetings.

As Elopak phases in more and more renewable electricity into its energy mix, energy emissions are reduced. However, this in turn increases the proportion of greenhouse gas emissions stemming from business travel. It is therefore crucial to continually focus on reducing travel, where possible.

Global Supplier Code of Conduct (SCoC)

- Labor standards
- Health and safety
- Environment
- Business ethics



Strengthening internal environmental knowledge

Environment-related issues are becoming more and more of interest to our customers, and internally there is a continuous demand for knowledge sharing on this topic. Some examples of internal environment-related training include:

- Internal training on specific topics such as our systems for sustainable board and polymer supply
- New employee training
- Webinars coordinated by the Environment team covering various environmental topics

CDP works to transform the way the world does business to prevent dangerous climate change and protect our natural resources.



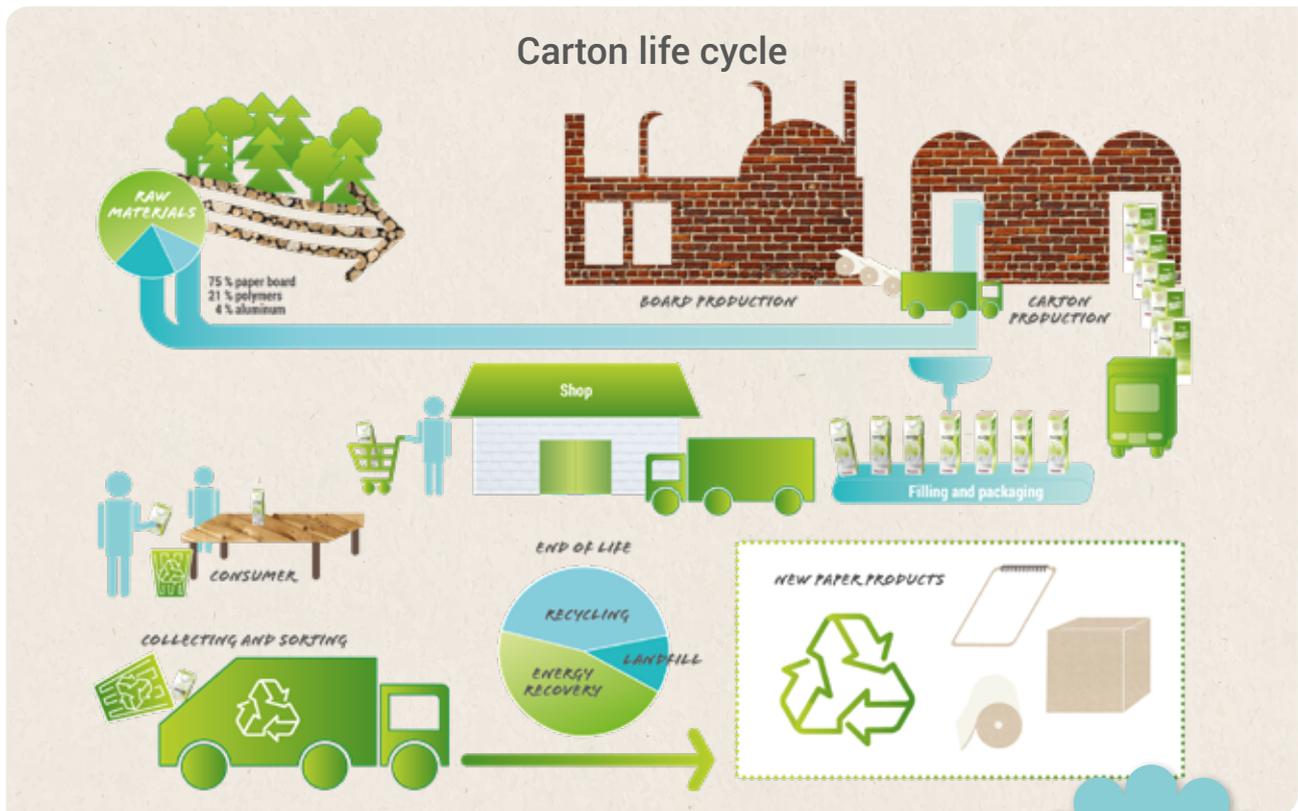
Governance aspects

Elopak's Future Proofed Packaging strategy lays the foundations for how Elopak aims to be carbon neutral in its products and operations. Environmental progress is reported regularly to top-management and to Board members. By having established routines for reporting and regular progress updates, the environmental progress is clearly measured and managed, and is a key priority for Elopak.

During 2015, Elopak's environmental reporting system (Footprinter) was further developed in order to substantially improve reporting capabilities. Elopak reports according to the principles of the Greenhouse Gas Protocol and publishes yearly environmental reports showing data development since 2008.



The Greenhouse Gas (GHG) Protocol sets the global standard for how to measure, manage and report GHG emissions.



2020 VISION:

Sustainable company