Sustainability report 2017

graanul invest

Interview with Raul Kirjanen

CEO at Graanul Invest

What is a sustainability report, and why did Graanul Invest decide to prepare one?
Like any other progressive production company, we also have a lot of important activities and achievements in areas that cannot be assessed on the basis of economic indicators alone. Understanding and quantifying the actual impact of our value chain gives us performance indicators that guarantee our economic as well environmental sustainability. Since stakeholders and clients are very interested in such information, we decided to start sharing it regularly. We would of course like to inspire other companies to develop environmentally sustainable solutions and improve the transparency of their supply chains as well.

What were the most significant achievements in 2017?
The report is already a simplified summary of everything we've done. I wouldn't want to highlight anything particular here. Operating within the limits of self-produced renewable energy and having extremely low emissions indicators per ton of production are unique in our sector, but they do not overshadow our other achievements in any way. I believe that we've been moving in the right direction with our technology and procedures, and we've managed to establish a production chain that already complies with EU requirements for 2030 in terms of its key indicators. Of course, this does not mean that we'll be slowing down our development.

What are the biggest backlashes?
The entire forestry and timber sector was affected by the difficult weather conditions in 2017. Graanul Invest uses by-products of the timber industry as raw material. Thus, if the sawmills are not operating, we have no sawdust and if forestry companies cannot get to the forest, we have no forest residues. Forced stoppages of pellet plants and smaller production volumes also lowered some efficiency indicators. It's also regrettable that the controversies and debates surrounding forestry made their way to the voluntary forestry certificate working groups and the cooperation between the parties in them was no longer based on facts. The spread of the certification systems that have worked for years has slowed down and this is bad for Estonian forests. The certified forestland belonging to Graanul Invest keeps growing, but this is not enough. All private forests in Estonia could be covered by the same certificate by now.

The company has implemented many new IT solutions. Is this something that is inevitable in our region or is it a new business direction?
Graanul Invest doesn't want to be perceived as a conventional industrial company and tries to be as innovative as possible in every area. We don't use real prototypes, but it's rather difficult to see solutions in our production for which a considerably more efficient and reliable version could be found. We digitalise and automate our supply chain as much as possible and our region really has great competency for this. We've also managed to implement existing programmes in production, but, for example, in the development of the automatic measuring systems used at our gates we've participated from the very first line of code. There is no doubt that we must contribute to IT, but the new business direction we're testing and mapping is biochemistry, where we hope to see the first successes in 2020.

What are your goals for 2018?
The overall goal is to improve all indicators. The numeric goals are covered in the report, but it's also important to increase CHP energy, achieve optimal pellet production capacity and expand our forest portfolio.

Company overview

Graanul Invest is a private capital-based company operating in the areas of forestry, bioenergy and production of renewable energy, which was established in 2003. The company operates in Estonia, Latvia and Lithuania. Latvian pellet manufacturer SIA Latgran joined the group in 2015. It consists of four production units: Jēkabpils, Jaunjelgava, Gulbene and Krāslava.

AS Graanul Invest Group consists of 11 contemporary pellet plans, one pellet sales and one energy sales organisation, six combined heat and power (CHP) plants and three companies engaged in timber harvesting. AS Graanul Invest Group has over 600 employees.

Pellet production

AS Graanul Invest Estonia	**SIA Graanul Invest** Latvia
OÜ Helme Graanul Estonia	**SIA Graanul Pellets** Latvia
OÜ Ebavere Graanul Estonia	**SIA Latgran** Latvia
OÜ Osula Graanul Estonia	**UAB Graanul Invest** Lithuania

Forestry

OÜ Graanul Mets Estonia	**OÜ Karo Mets** Estonia (100%)
OÜ Valga Puu Estonia (50%) **OÜ AAB Ekskavaator** Estonia	**AS Roger Puit** Estonia (50%)

Energy production

OÜ Graanul Energia Estonia	**SIA Inčukalns Energy** Latvia
OÜ Helme Energia Estonia	**SIA Graanul Pellets Energy** Latvia
OÜ Imavere Energia Estonia	**SIA Graanul Invest Energy** Latvia
OÜ Osula Energia Estonia	

Pellet sales

AS Pelletiküte
Estonia

2017 in figures

Due to the complicated situation in the international pellet market and the extremely rainy second half of the year, our pellet production totalled 1,649,486 tons (1,845,466 tons in 2016).

Our clients have generated approximately 30,000,000 GJ (gigajoules) of renewable energy from this. The optimal annual production capacity of Graanul Invest Group as of the start of 2016 is 2,200,000 tons of pellets.

In 2017 our biomass based combined heat and power (CHP) plants produced:

- 277,307 MWh of power (215,210 MWh in 2016)
- 760,907 MWh of heat (646,924 MWh in 2016)

The group owned 36,414 ha of forestland in 2017 (30,861 ha in 2016). 693,050 trees were planted in 2017 (732,000 trees in 2016). The majority of the forestland is located in Estonia. In 2017 we also started with forestry in Latvia and the goal for 2018 is to considerably expand the Latvian forest portfolio.

Production

Pellets	2016	1 845 466 t
	2017	**1 649 486 t**
Electricity	2016	215 210 MWh
	2017	**277 307 MWh**
Heat	2016	646 924 MWh
	2017	**760 907 MWh**

Forestry

Forestland	2016	30 861 ha
	2017	**36 414 ha**
Trees planted	2016	732 000
	2017	**693 050**

Graanul Invest forestry

Three large Estonian forestry companies belong to our group: Karo Mets OÜ, Roger Puit AS and Valga Puu OÜ. Between the three of them, we now have over 36,000 hectares of forestland to manage, which comprises ca 1.6% of Estonian forests. This could be 2% in the new year, but the implementation and use of the highest forest management standards remains as the premise of our forestry activities. We are also planning to open a forest portfolio in Latvia in 2018.

All of our forests are covered with the PEFC (Programme for the Endorsement of Forest Certification) certificate and 43% of forestland also has the FSC® (Forest Stewardship Council) certificate. As we operate internationally, it is very important to us that in addition to the local Forest law, our forestry also complies with the forest management requirements recognised around the world.

Reforestation is an inseparable part of forest management, as no forest owner wants to see their forests shrink. Graanul Invest Group planted over 693,000 trees in 2017. Unfortunately, this was fewer trees than the year before due to a shortage of plants, but we're definitely planning to plant more trees in 2018 than in the previous two years.

2017 planted trees

Spruce 520 900

Pine 106 600

Birch 65 550

together 693 050

The prescribed cut of our forest companies was 664,000 solid cubic metres in 2017. Cutting was done in the company's own forest as well as third party forests. About 40% of all roundwood went to sawmills, 43% to the energy industry and 17% to the paper industry. Our priority is to manage our forests in a manner that would increase the share going to the sawmills. All crushed logging debris i.e. 500,000 cubic metres of forest chips was taken to the CHPs of Graanul Invest for renewable energy production.

Production of woodpellets

Graanul Invest Group produced 1,649,486 tons of wood pellets in 2017, ca 8% of which were premium pellets for home use and the rest industrial pellets. This is not a lot considering the 2.2 million ton optimal production capacity of the group, but since we do not go outside our quality classes or procurement areas to obtain raw material, we're forced to produce according to the natural waste generation of the local timber industry. We only use the leftovers of the forest and timber industry as raw material: sawdust, chipped wood, off-cuts, firewood, defective logs, technological wood and forest chips. Difficult climatic conditions caused a crisis in the timber industry in the second half of 2017, the flows of materials were nonexistent and many production units were standing still. The consequences of this situation can also be felt in 2018. The biggest volumes were produced at our Latvian plants – 809,439 tons. 761,346 tons was produced in Estonia and 78,701 tons in Lithuania.

The average energy consumption of production was 141.76 kWh per ton of pellets. This has increased by 1.4% in comparison with 2016, mainly due to the standstills and relaunches. Energy consumption was the most efficient at our Latvian plants in Jēkabpils and Jaunjelgava (124.94 kWh/t and 130 kWh/t, respectively). The average indicator of the group in 2018 should once again be below 140 kWh.

The consumption of diesel in production was 0.62 litres per ton of product. Diesel is used by our front loaders, which are used for material handling on plant territory (storage and feeding). We managed to use diesel more efficiently in 2017 and the indicator per ton of pellets was 16% smaller than in 2016.

Average water consumption was 15% more than in 2016 – 0.12 m³ per ton of pellets. The small production volumes caused by the shortage of raw material are also to blame here. The goal for 2018 is to reduce the consumption of water to less than 0.10 m³.

Consumption	2016	2017	2018
kWh per ton of pellets	139.7	141.76	139
litres per ton of pellets	0.74	0.62	0.60
m³ per ton of pellets	0.10	0.12	0.09

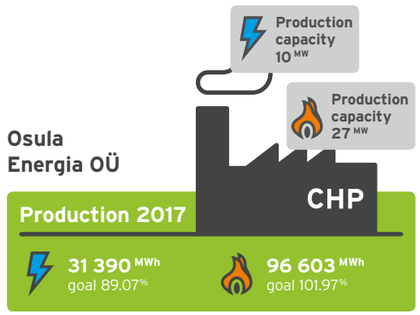
Combined heat and power plants (CHP)

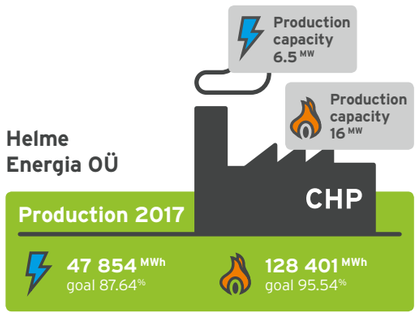
Combined heat and power plants are biomass-based units that generate heat and power at the same time, which we then use to supply our pellet plans as well as the local network. We use wood bark and chipped forest residues as fuel for the CHPs. We obtain the majority of the wood bark from the debarking lines of pellet plants, but we also buy the material left over in the timber industry. Forest chips, i.e. a mix of branches, treetops and bark, have been chipped by the time they get to our CHPs as a by-product of the forest industry.

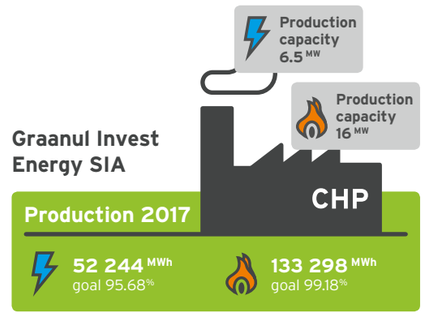
Extending the sustainable forest management and supply chain requirements to the procurement of fuel allows us to guarantee that no illegal biomass of prohibited origin or containing endangered species ends up in energy generation. This gives us the assurance that the energy we generate is really renewable and sustainable.

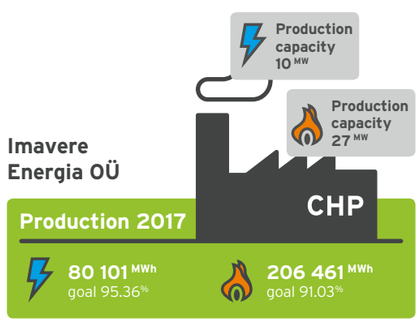
Graanul Invest has been installing combined heat and power plants next to its pellet plants since 2012, which has resulted in a remarkable increase in the company's energy generation capacity. The newest CHP in Osula (Osula Energia OÜ) was built in summer 2017 and the group can now produce 344,232 MWh of power and 913,920 MWh of heat per year.

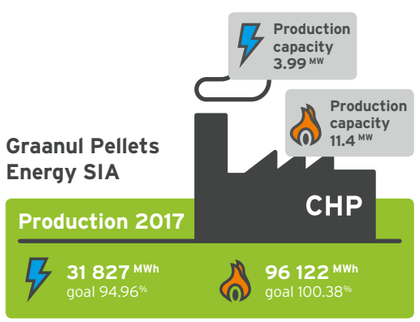
Despite our extremely high internal goals, allowing only a two-week maintenance break, the CHPs have been very close to their optimal capacity. With the near catastrophic rainfalls and struggling forest industry, our company's management had quite modest expectations for CHP performance but looking at the target completion rates (94% for power, 98,8% for heat) we can be very satisfied with energy generation in 2017. It is important to note that all CHPs performed above 80% efficiency throughout the year.

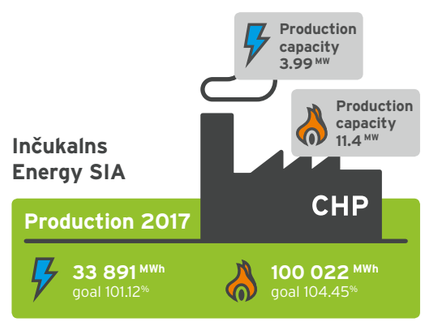












Use of renewable energy

Graanul Invest produces energy for itself and for others. The heat from CHPs is directed to pellet plants, where it is used to dry the production material. The produced power covers the energy needs of all of the CHPs as well as the electricity demands of our six pellet plants. The remainder is sold to the local electricity grid as renewable energy.

The pellet plants that have CHPs in their territories no longer have to produce significant quantities of additional heat energy, because the CHPs cover the majority of their needs. We still have the drum dryers, but we now only use them temporarily in the event of CHP malfunctions or during extremely cold periods. Our drum dryers also operate on biomass without fossil emissions, but they do not generate power. This is why the use of CHPs is considerably more efficient, as heat is generated as a by-product of power or vice versa.

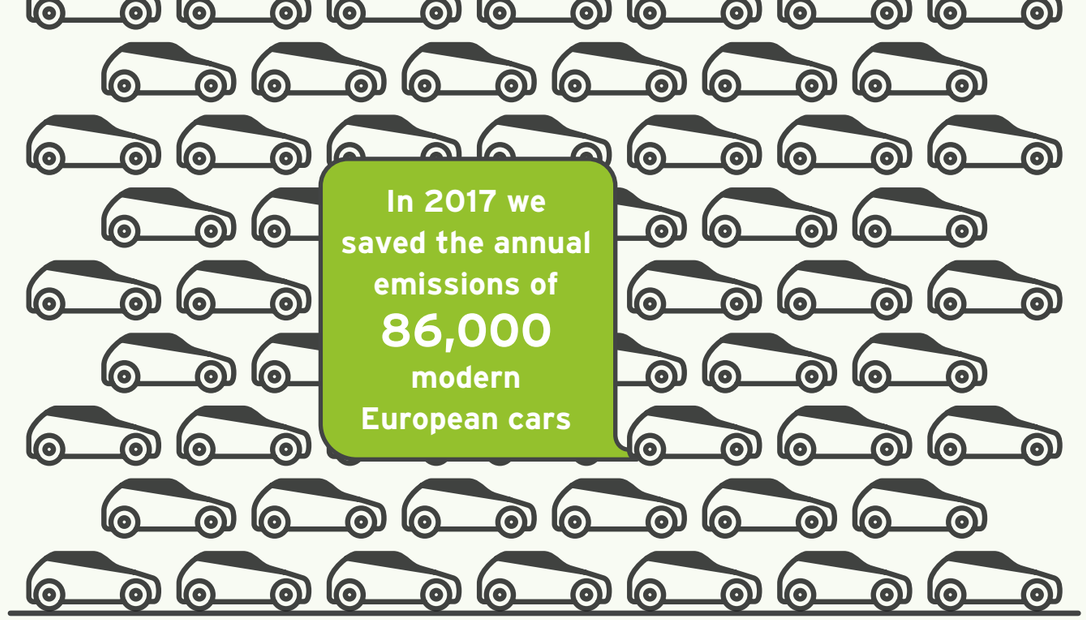
In 2016 we had to purchase 26% of electricity in Estonia from the national electricity grid, but in 2017 we already generated 21% more green energy than we consumed ourselves – 33,737 MWh. This indicator is almost 40% in 2018 thanks to the addition of Osula CHP.

The total electricity consumption of the Latvian pellet plants with CHPs in 2016 was 35% less than the power they generated and sold to the grid. The same figure in 2017 was 50%, but unfortunately this was not achieved on the account of an increase in capacity, but due to the small production volumes of the pellet plants in the second half of the year (difficult weather conditions in forests). The total consumption of these plants in normal conditions is 30-35% less than the power generated, which is also the goal for 2018.

In general, Graanul Invest Group is now generating more energy than it consumes. In 2016 we were still buying a third of power from third parties, but in 2017, our electricity generation already exceeded our consumption by 8%. This is a remarkable achievement because we only generate energy in five locations, but we have 11 plants in total. The plan is to exceed the group's total power consumption by 19% in 2018.

The best result was achieved by the so-called Imavere industrial park (pellet factory + CHP) , which generated 65% more electricity than it used. This is a whopping 42,006 MWh of green electricity to the local power grid! The cooperation between Osula Graanul and Osula Energia is expected to have a similar result in 2018.

It is extremely important in terms of the company's energy independence and sustainability that we've crossed the near zero-energy line, but what is even more important is that all of the power we generate is renewable energy free of fossil emissions.



2016

Consumption
278 995 MWh

Production
215 210 MWh

2017

Consumption
255 616 MWh

Production
277 307 MWh

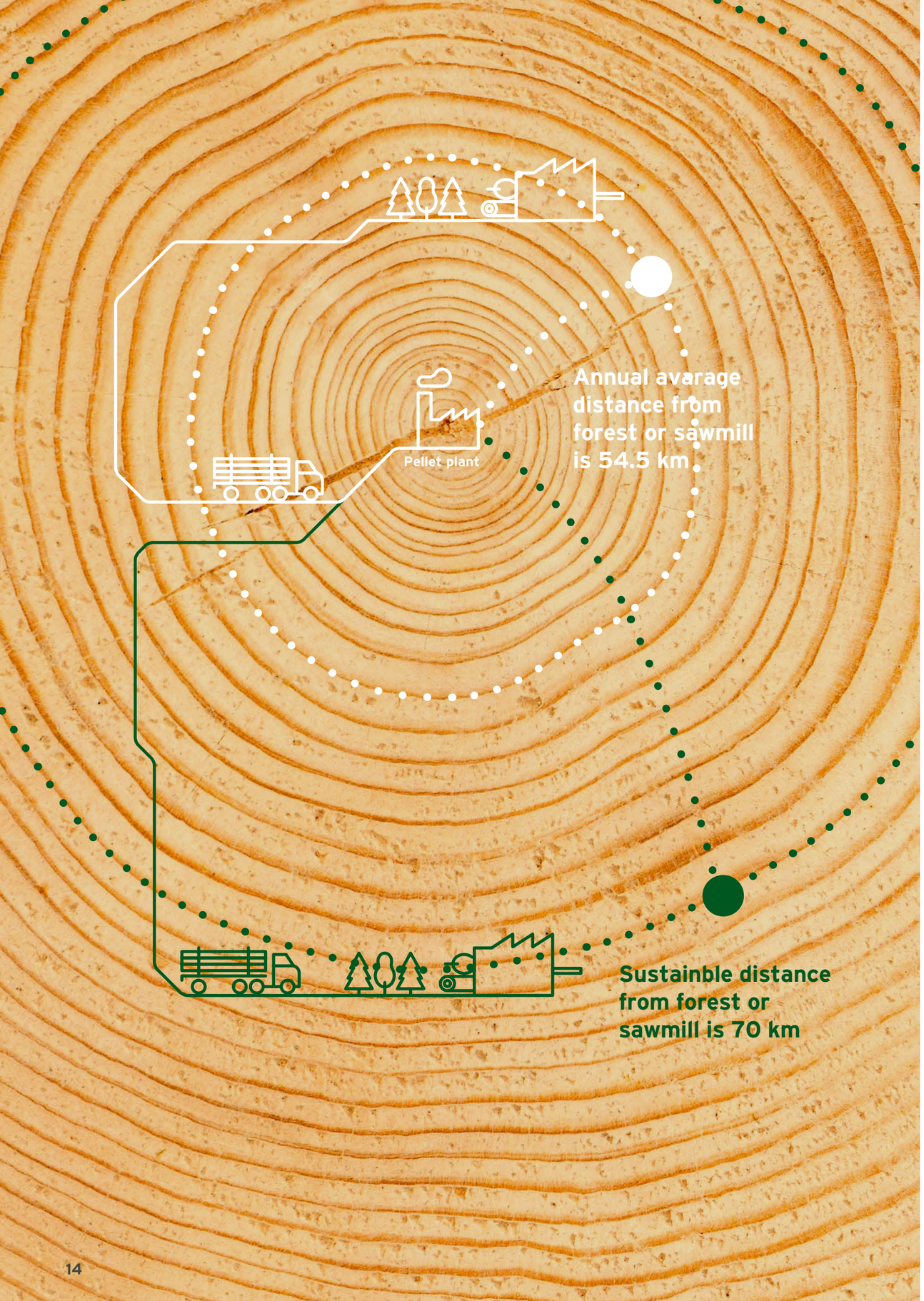
2018

Consumption
276 000 MWh

Production
328 000 MWh

The Estonian CHPs of Graanul Invest are the sole reason why there was 160,000 MWh more of green power in the carbon-intensive power grid of Estonia in 2017. That is 121,952 fewer tons of fossil CO2, i.e. figuratively speaking, we saved the annual emissions of 86,000 modern European cars.

Since the emissions intensity of grid electricity in Latvia is considerably lower, we have built our biggest CHPs in Estonia. However, this does not make the ca 120,000 MWh of energy generated there any less important.



Raw Material Sourcing

We produce pellets from the residues of the timber industry (sawdust, chipped wood, off-cuts, defective logs) and the low-quality leftovers of the forest industry (fire-wood, technological wood, defective logs, spoilt wood, etc.). We use forest chips (biomass made of crushed forest debris) in CHPs and dryers. In order to be environmentally and economically sustainable, we have calculated that the average procurement radius of a production plant should not exceed 70 km if depending on truck transport. Our thorough supply chain control systems give us an overview of the origin of the materials (up to the forest) as well as their journey before they reach our plants.

In the case of timber industry residues, we save the distance from the sawmill or component plant to our gates and in the case of forest industry residues, their journey from the forest to our gates.

We're pleased to see that our average material procurement radius has remained within the limit of 70 km and 20% below the established limit. Although our suppliers change and nobody cuts the same FMU two years in a row, the average procurement radius varies very little. The average of Graanul Invest was 57 km in 2016 and 54.5 km in 2017. In Estonia the average is between 50-52 km and in Latvia 56-58 km. The figure is higher in Latvia, because rail transport is also used there.

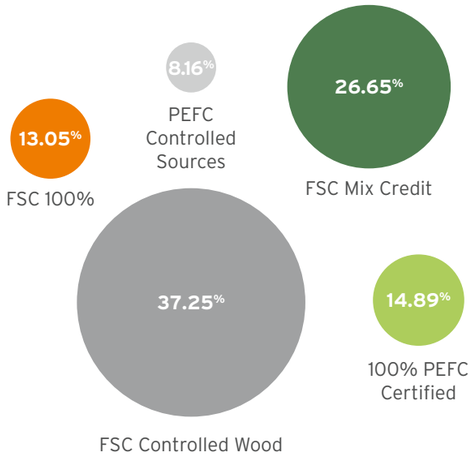
Graanul Invest would like to follow the natural process of the regional timber industry and buys raw material from areas where it is actually generated. Forcing our suppliers to only use the closest procurement regions for the purpose of reducing transportation costs is not feasible. However, we monitor these figures very carefully in order to monitor the GHG indicators of the supply chain. If we exceed the limit of 70 km in raw materials transport, we will have to compensate for the added emissions in some other section of the supply chain.

Certificates and GHG

Graanul Invest holds several certificates in various sections of the value chain that are recognised all over the world. Obtaining them has never been a goal in itself, but they represent recognition of our well-functioning internal procedures. Certificates help us develop ourselves further and keep the company one step ahead of international requirements.

Since forestry is one of our main activities and the source of all of our raw material, we have obtained the FSC® and PEFC sustainable forest management and supply chain certificates. All of our pellet plants and forestry companies are covered by them. Additional requirements for timber felling, reforestation, origin, legality and species exclude unsuitable raw materials from our supply chain.

Feedstock distribution between forest management certificates



We hold the SBP (Sustainable Biomass Partnership) and GGL (Green Gold Label) certificates to ensure sustainable procurement, logistics and supply chain efficiency. They allow us to precisely ascertain and regulate the fuel expenses and greenhouse gases related to our products. The underlying principle of the bioenergy industry is to ensure that the biofuel's potential to reduce fossil emissions is not lost in the supply chain. SBP has become the most important certificate on the biomass market and we're pleased to admit that over 94% of our products comply with the highest requirements of this certificate (SBP-Compliant Biomass).

SBP reports have indicated that the production and supply chain of Graanul Invest has a very low average emissions factor: 9.5 g CO2-eq/MJ (includes procurement and shipping of materials). **This is 3.5 times below the average of the European pellet market!** Actually, this indicator is even several times smaller, but unfortunately the currently recognised greenhouse gas calculation methods do not yet take into account the use of emission-free power of CHPs. Our emissions factor will drop by another 60-70% when the calculation methodology improves.

The quality of our wood pellets easily exceeds the highest requirements on the market established with the ENplus® and DINplus standards. Our industrial pellets also comply with the quality requirements primarily established for premium pellets.

In order to manage our activities better and more systematically, we use an integrated management system that complies with ISO standards and covers quality, the environment, energy and occupational safety. As an update, we have introduced an energy management system, which has already been successfully implemented in our Latvian plants and will also be implemented in the Estonian plants in 2018.

Shipping

Graanul Invest purchased its first ship suitable for transporting bulk goods. The ship was named MV Imavere after the location of our first pellet plant and it was registered under the Cypriot flag. MV Imavere can transport about 30,000 tons of wood pellets and will start transporting our own products to our clients in the United Kingdom and the Netherlands.

The use of larger ships will reduce the ecological footprint of pellet production and trade, and make us less dependent on oil price-driven transportation prices. This is because the quantity of fuel spent on shipping per ton of pellets will decrease by up to 48% in comparison with a ship that can carry 7,000 tons of goods. We will save 1.5 million litres of marine fuel if MV Imavere achieves its plan for 2018.

Since we also have clients whose ports don't have room for larger vessels, we're planning to start using LNG ships, which have been built to our specific needs. We're planning to build the first LNG ship in 2019. Ships operating on liquefied natural gas (LNG) are not only more efficient, but also generate considerably fewer emissions.

Graanul Invest's new LNG vessel expected to be completed in 2019

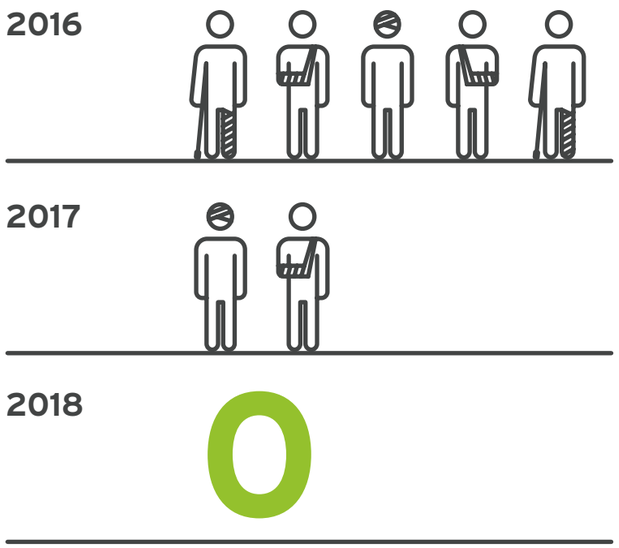
Health and safety

A safe working environment is the basis for the achievement of all our goals. This is the area we check the most frequently and thoroughly in our company. Irrespective of constant expansion and construction work, an increase in the number of occupational accidents would never be acceptable.

There were five light occupational accidents in our company in 2016 and two occurred in 2017. This is not a lot for a large industrial company, but the number is still larger than our goal – 0. We continue checking, training and developing so that we can achieve such a working environment one day. It is extremely positive that no accidents occurred in eight of our plants in 2016 and 2017.

Our occupational safety requirements also extend to the supply chain, where we check the safety-related knowledge and activities of our suppliers. In Latvia, we audit our suppliers during forestry work to make sure that they follow all safety requirements.

Occupational accidents



Constant improvement

At our Helme plant, we found a way of catching all the wood dust from the water vapour extracted from the coolers. The added cyclone filters catch 20 kg of fine dust per hour, which we put back into production.

Our last natural gas powered steam boiler in Ebavere has been replaced with a biomass-powered one. The annual capacity of this device is small, but for every megawatt-hour we now emit 200 kg less fossil CO_2.

We built a system at our Ebavere plant that directs the collected stormwater to production. This system has the potential to reduce the plant's water consumption by more than 25%. We also have a system for melting the snow collected from the territory, which can reduce the quantity of water consumed from the supply network even further in a good winter.

Our most modern belt dryer in Osula has an innovative vapour re-circulation system, which collects the vapour generated during the drying of production material and directs it back to the drying line. This solution has proven to be very efficient in terms of productivity as well as reducing the emissions of wood dust. In 2018 we're planning to build a re-circulation system for the belt dryer in Imavere as well so we can reduce the wood dust emissions there by 60%.

The Osula CHP is the first in our group with the capacity to share its heat energy (in addition to electrical energy) with the neighbouring sawmill. This is an important step towards an even more efficient use of energy, so that all of the generated heat is fully used up.

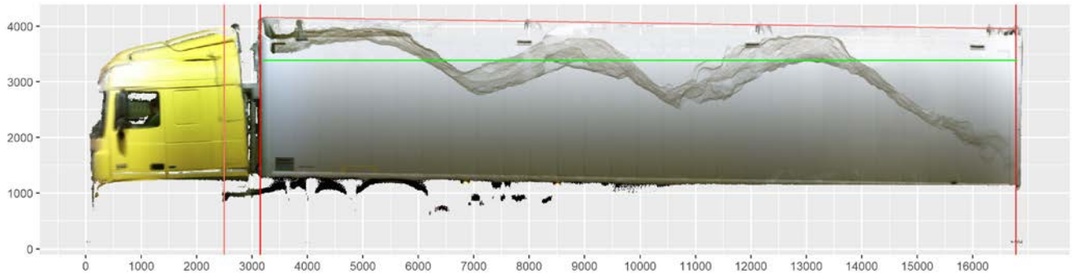
Loadmon

Graanul Invest uses a fully automatic wood measuring system in its Estonian plants, which allows roundwood as well as bulk material volumes to be measured on delivery trucks. The measuring is done with sensors installed on the gate.

The sensors generate a millimetre scale point cloud (3D), which the system uses to analyse the parameters of the load and calculate the volume based on standardised methodology.

The software was developed by IT company Almic in cooperation with Graanul Invest and it was named Loadmon. The system was updated and made more accurate in cooperation with third party control measurement providers. Loadmon makes it possible to send the measurement results easily to other systems and give wood suppliers feedback in a web application, which shows the formation of the wood stack solid volume coefficient, the measurement results and a 3D model of the loaded truck.

The introduction of Loadmon has been a massive leap for us and we can now measure truck loads very accurately and transparently. All of the measuring equipment has been calibrated by Metrosert. Measuring everything honestly gives an advantage to the entire chain – to the forest owner, the forest manager, the transport company and the buyer of the wood, because knowing the exact volume of wood is important to every link in the chain. The measuring system also reduces the time trucks spend at gates, which in its turn reduces fuel consumption.



ELVIS

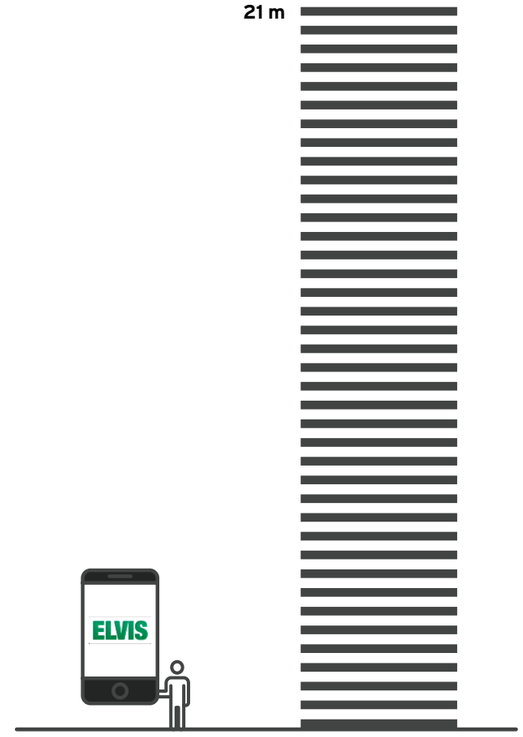
Electronic Waybill Information System

ELVIS, which is the electronic waybill information system created as a project of the Estonian Forest and Wood Industries Association, replaces the conveyance paper document, which is mandatory upon transportation of forest material, with an electronic conveyance deed, i.e. waybill, which accelerates the movement of information, improves the accuracy of information and is environmentally friendly.

Graanul Invest made the use of electronic waybills mandatory for all of its domestic suppliers as of 1 January 2017. In the first year alone, we have reduced the paper consumption related to the transport of raw material by 190,000 sheets. If stacked on top of each other, these sheets would form a tower that is 21 metres tall. It is known that the suppliers that have joined ELVIS have also started demanding electronic waybills from their sub-suppliers, which increases the quantities of paper saved in relation to our activities even further. The potential for saving paper is even larger in Latvia, but the creation and implementation of an electronic waybill there has been slower and will probably be completed in 2019 or 2020.

Saving paper is certainly important, but ELVIS has also improved the transparency of the entire industry and the accuracy of material flows:

- The system can only be used with authentication (ID card, Mobile ID). This means that a responsible person is always linked to the cargo.
- The distance covered by the load is recorded in addition to the legal and geographic data of the sender and the recipient. This provides important information about the extent of the procurement regions and the fuel costs related to the transport of materials.
- No cargo can be considered completed before the recipient has accepted it, which means that the data, quantities and all other information on the electronic waybill is accepted by both parties. If a document is incorrect, the recipient can refuse to accept it until a new one is prepared. The advantage of ELVIS is obvious here as well, as the incorrect waybills do not end up in the paper waste bin.
- An electronic information system in a common format makes it possible to interface the information with accounting systems (or any other volume calculation system) where data were previously manually entered from sheets of paper. ELVIS excludes retyping errors.



The advantage of using ELVIS compared to former paper consumption

Biochemistry

Graanul Invest has a strategic target of becoming the leading European lignocellulosic biomass derived (2nd generation) biochemical and biomaterial producer by 2030. To reach the set target, we have been investing time and effort into validation of different wood valorisation technological solutions since 2016 and selected an innovative biomass fractionation technology to focus on. The fractionation technology solution still needs some industrial optimisation, but it has a strong impact on the conventional technological wood processing sector via significantly higher conversion efficiencies (> 90%) of wood to useful products. The internal target is to have a first-of-a-kind industrial hardwood fractionation unit up and running within 2020. In the Baltic context, special attention should be on the fact that this platform also provides a solution for alder (alnus) to be used in higher value applications than just energy applications. After the first scale-up with hardwood, softwood and other lignocellulosic biomass resources will also be trialled and tested.

In addition to higher wood to product conversion efficiency the fractionation technology also allows for redefining the technological wood processing "the larger the better" industrial model. Our views on the conceptual difference of innovative fractionation technology compared to conventional solutions are the following:

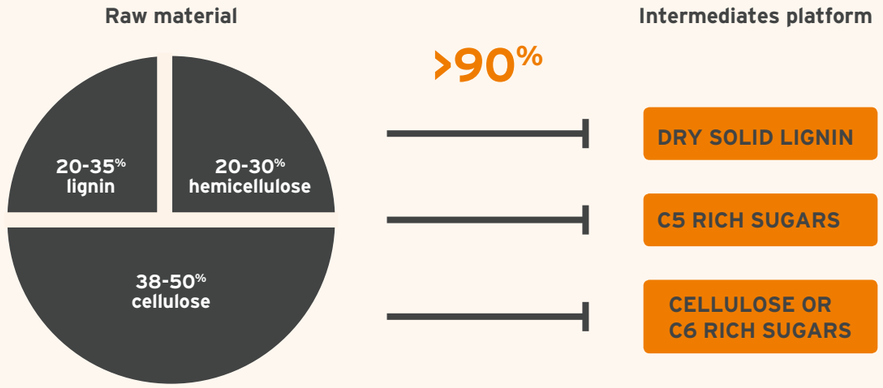
- Wood species agnostic technology
- Wood to useful products (non-energy) conversion >90%
- Modular design and small "economies of scale" supporting regional biomass supply and regional development. The biomass requirement for an industrial facility is similar to existing pellet plants in the Baltics
- Minimal water and chemical use, environmental impact and ecological footprint

Also from the products' viewpoint, the fractionation technology allows flexibility to adjust to market fluctuations. The main intermediate products to be used for further processing are:

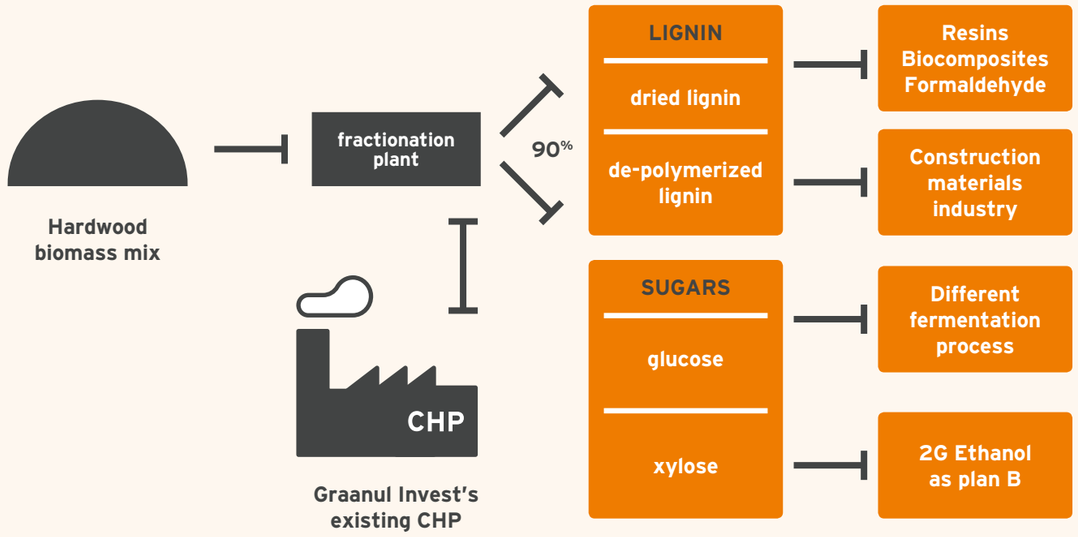
- Hemicellulose derived xylose a rich sugar solution
- Downsized crystalline cellulose or derived glucose-rich sugar solution
- High purity near native characteristics of lignin as an easily extractable and valuable product
- The non-useful parts of the by-products are used for energy applications via biogas or solid residues for combined heat and power production

Certified and sustainable 2G biomass-derived sugar solutions could be used as feedstock for different industrially proven or under development novel fermentation processes to produce platform chemicals for feed, fuel, plastics, etc., applications. Downsized crystalline cellulose is a material with increasing market pull and has numerous applications in the food, feed, pharma, etc., industries. High purity near native lignin has novel characteristics compared to conventional pulp mill-derived lignins, which significantly broadens potential applications for lignin in the construction material industry, filler applications, etc. The first target for Graanul Invest is to become a reliable intermediate product supplier on the market, but with a focus from day one on validating the best possible solutions for intermediate product downstream processing. This would help to move locally further in the value chain and promote maximum regional value generation via smarter and higher value products.

Wood fractionation based biorefinery as alternative technological platform



Innovative wood fractionation platform



Charity and supporting sports

ESTONIA

- Osula Graanul OÜ: supported the Sõmerpalu Lepatriinu nursery school by purchasing them a closet for drying coats as well as sports equipment
- Forest companies: support the Raudmees, Parksepa and FC Helios sports clubs
- Graanul Invest AS: Supported the participation of the University of Tartu research team in the international competition of synthetic biology iGem (International Genetically Engineered Machine)

LATVIA

- SIA Graanul Invest: supporting the Youth Centre in the Smiltene region that is located in the Launkalne production area in order to renovate premises and acquire various items for spending leisure time
- SIA Latgran: financing the new playgrounds in the yard of the Pīlādzītis nursery school in the region of the Krāslava plant

LITHUANIA

- UAB Graanul Invest: supporting the children's home in the Alytus region (acquisition of furniture, beds, changing tables, etc., for the premises for babies and small children opened in early 2017)

Graanul Invest has been a sponsor of the national team of the Estonian Volleyball Federation for a long time. Since the company's vision is aimed at the future, we decided to be the sponsor of the youth team from 2018 to 2020.

"Volleyball has become the most successful ball game in Estonia and Graanul Invest is proud to support the generation of players. Young people are our future and our company's vision is also aimed at the future in order to widen the spread of renewable energy in the world. We hope that our support will help maintain the high level of Estonian volleyball and in a few years' time, the young players will have grown into valuable players in the adult class."

Raul Kirjanen
Member of the management board at Graanul Invest

Looking to the future

The sustainability report of Graanul Invest Group is published once a year (in Q1). As a result of the new system and approach, the company has set itself key performance indicators that will be determine the group's focus, policies and investments in the future.

The constant improvement of these indicators guarantees the progress and sustainability of our activities throughout the value chain.

Trees planted: 693,050

Energy consumption in pellet production:
141.7 kWh per ton of pellets

Area of certified forestland: currently 100%, but
this may not decrease as the forest portfolio grows

Occupational accidents:
2 in 2017, but the goal is 0

Supply chain GHG (greenhouse gases)
per amount of energy contained in pellet:
currently 9.5 g CO2-eq/MJ.

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