Sustainability

Report 2015

SKJERN PAPIRFABRIK

Survey 2015

Savings of energy

Page 30 10,259 MWh saved by energy projects implemented during 2015.

Investment in technology

Page 30 70 mill DKK invested in biomass fired boiler plant

Air emissions

Page 32 9.7 % reduced CO_2 emission per tonnes of paper, corresponding to 1,417 tonnes in 2015

Saving on water consumption

Page 25 11.5 % reduced water consumption, corresponding to 43,012 m^3 in 2015.

Employees

Page 10 14.6 years are average seniority for Skjern Papirfabrik's employees across all job functions.

Production of district heating

Page 29 39,243 MWh of district heating produced in 2015, corresponding to the average consumption of 2,168 households.

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Preface

UN Global Compact
The UN Global Compact is a strategic initiative for companies that are obliged to run a business in accordance with 10 universally accepted principles within the areas of human rights, workers' rights, environment and anti-corruption.

Skjern Papirfabrik acknowledges the growing importance of companies corporate social responsibility, and as a reflection of this the mill has since 2013 been a member of the UN Global Compact, being the world's largest initiative for spreading of the companies' CSR.

In this Sustainability Report for the financial year 2015 we seek to give a comprehensive picture of the company's efforts in the different fields.

Review
For Skjern Papirfabrik the past year meant market-related challenges, but also much attention to the largest single investment during the 50-year company history. Therefore, concentration has to a large extent been on the market development and on phasing out fossil fuels for the benefit of using bio fuels instead.

In our core business the year was in general divided into two different market scenarios. During the first period from January till September the market more or less developed as expected in our budget. The mill's progress and results were able to be reached. During the second period from September till year-end the state of the market changed drastically on almost all our market segments. A significant recession among the customer portfolio had a natural effect on the mill's sales. The change had an even larger effect on the stock volume, and by the end of the year we produced with a reduced utilisation of capacity.

As a large part of the expected improvements of our environmental goals are in 2015 based on full utilisation of our production capacity a reduced production volume will naturally have a negative impact on the outcome.

The primary sectors where it was impossible to meet the expectations are concentrated on production volume, energy goals and heat production for the local district heating network. Due to a reduced paper and heat production the total CO_2 emission is higher than the expected. However, still a significant reduction compared to 2014 levels.

From the positive outcome of our environmental goals we can mention the savings on intake of municipal process water for our production, where savings are 8% higher than expected, and also discharge of subsequent process wastewater for the municipal wastewater treatment plant, where the reduced volume is 19,000 m^3 more than expected.

If we move away from the mill's core areas the change from using fossil fuels for production of process steam and to using bio fuels required many resources and much focus.

The project consists of the installation of a wood chips fired steam boiler plant for phasing out the existing N-gas fired boiler. Total construction costs represent 70 million DKK, and via the Danish government's introduction of renewable energy funds from 2013 which support the political intentions for more spread of bio fuels and the use of industrial district heating the public subsidy for the project lies between 30-55 %.

The project has many long-term benefits for both the mill's cost structure and the external environment. And the boiler caught much attention in the field for such wood chips fired boiler plants, especially as this plant is one of the largest of its kind here in Denmark.

For optimum utilisation of the waste heat in the exhaust gas a heat pump was installed to increase the heat production for the local district heating network. The utilisation of waste heat from existing heat pumps and the new wood chips fired plant means that Skjern Papirfabrik supplies approx. 52 % of the heat requirement of Skjern City in 2015.

One of the major improvements to the external environment is emission of CO_2. In spite of the start-up of the wood chips fired boiler later than estimated we saw a reduction of 1,195 tonnes compared to 2014. Reduction of emissions for the years to come will be significantly better with full operation on the wood chips fired boiler.

Another important factor in the mill's efforts to continuously improve the environment is both the intake of process water for production and the discharge of process wastewater for the municipal wastewater treatment plant. With intensive focus we have succeeded to reduce the water consumption by 43,012 m^3 in 2015. Less water intake naturally reflect less emission volume, which meant a reduction of 28,868 m^3.

Originally, Skjern Papirfabrik was founded in 1965 by a group of enterprising local citizens. When calculating the readers will find that the year 2015 had a special meaning for the mill. On the same occasion we celebrated the present group of owners 10th years anniversary and the undersigned's 40th years anniversary. All three events were celebrated as one common 100th anniversary on September 18 with an Open House. Guided tours at the mill were included where employees acted as guides. The day ended in an appropriate manner with a party for all employees and their partners.

A year with much focus on large market deviations – the largest investment in greener conversion and not least the 50th years anniversary carried Skjern Papirfabrik through 2015.

With the expectation of more stability and normal market fluctuations we look forward to an exciting and challenging 2016 for the mill and its employees.

Jørgen Thomsen, CEO

Facts about the mill

Name and location
Skjern Papirfabrik A/S
Birkvej 14, DK-6900 Skjern
Tel.: +45 97 35 11 55
E-mail: skjernpaper@skjernpaper.com
Website: www.skjernpaper.com

Industry/NACE code
21.12 – Production of paper and paperboard
17.12 – Production of paper pulp

Supervising Authority
Waste and wastewater: The Municipality of Ringkøbing-Skjern
Others: The Danish Environmental Protection Agency Aarhus

Major Environmental Approvals
20.12.2000: Environmental approval, revised total approval. Approval is under review.
08.07.2010: Environmental approval for N-gas fired boiler plant.
27.10.2015: Environmental approval for wood chips fired boiler plant.
17.06.2014: Approval for connection of wastewater.

Major Environmental Legislation
Environmental Protection Act
Danish Statutory Order on Waste
REACH
Chemical Substances and Products Act

Accredited Verification
Bureau Veritas verification No. DK-V-6002
The verification does not include issues concerning working environment and CSR.

Certifications
Skjern Papirfabrik has been certified according to the following standards:
ISO 14001: Since 1998
EMAS: Since 1998
ISO 50001: Since 2003
FSC: Since 2013

Period covered
01.01.2015 – 31.12.2015

Date of Issue
Mid April 2016

Owners
Skjern Papirfabrik has since 2005 been owned by S.P. Holding, Skjern A/S, which is again owned by Buur Invest and three of the employees from the factory management.

Management

Chairman of the board	Charlotte Buur
CEO	Jørgen M. Thomsen
CFO	John T. Nybo
Logistics manager	Hans Hessellund
Sales manager	Nikolaj Thybo

Paper machine

Type	Fourdrinier
Machine width	294 cm
Grammage area	90 – 475 g/m^2

About Skjern Papirfabrik

Skjern Papirfabrik is the only remaining paper mill in Denmark. The mill produces paper and cardboard consisting of 100 % recycled paper, and thus the mill takes an important part when it comes to the use of recycled paper.

Production is mainly cardboard and paper, delivered for further processing at our customers around Europe. Skjern Papirfabrik is an order producing mill - all products are made in a close cooperation with the customers. This gives opportunity to specify the customers need.

0.26 % **was the complaint rate in 2015**

From 2013 it has been possible to have FSC-certified products from Skjern Papirfabrik.

As a relatively minor paper mill our strength lies in being a good business partner, supplying quality products on time and showing large flexibility when it comes to customer needs.

We make ongoing investments to make production more efficient, to reduce energy consumption and other environmental impacts from the paper production.

In 2015 a new large wood chips fired boiler plant was installed, in replacement of the existing N-gas fired boiler.

This means a major CO_2 reduction, and thus Skjern Papirfabrik will be far beneath the benchmark for CO_2 emissions for similar products.

Furthermore, Skjern Papirfabrik produces a large amount of district heating on the basis of waste heat from the drying unit of the paper machine and the exhaust gas from the boiler plant. The heat goes directly through Skjern district heating plant's network to the users in Skjern City.

The mill is located in beautiful natural surroundings close to Skjern River.

60,642 **saleable tonnes of paper were produced in 2015**

Strategy for selected parameters

	Status 2014	Status 2015	Goal 2016	Value to Skjern Papirfabrik and to the society
Paper production	63,077 net tonnes	60,642 net tonnes	61,500 net tonnes	Improved financial basis, which is a force to further development of the mill. Increased paper production has also positive impact on other environmental parameters.
Specific energy consumption	1,374.6 kWh/ gross tonnes	1470.3 kWh/ gross tonnes	1400.0 kWh/ gross tonnes	Better economy and less CO_2 emission per tonne, calculated on the basis of gas, wood chips and electricity for production.
Production of district heating	40,079 MWh	39,243 MWh	45,000 MWh	Increased production of district heating from waste heat reduces consumption of fuels at Skjern district heating plant.
CO_2 saving in consequence of district heating production	8,200 tons	8,029 tons	9,200 tons	Total CO_2 emission is considerably reduced by substituting ordinary district heating production [1)] with district heating based on waste heat.
Part of biomass as fuel	0 %	8 %	90 %	Substitution of natural gas gives a considerably lower CO_2 emission. Furthermore the fuel price is lower per energy unit.
CO_2 saving as a consequence of substitution of natural gas with biomass [2)]	0 tons	1,195 tons	13,443 tons	Substitution of fossil fuel with bio fuel is completely in compliance with the Danish government's 2020 plan.
Water consumption	374,515 m³	331,503 m³	326,500 m³	Less water consumption means less strain on the water resources.
Amount of wastewater	330,259 m³	301,391 m³	310,000 m³	Less use of wastewater gives a lower hydraulic strain on Tarm wastewater treatment plant, and an economic gain.

1) It must be assumed that district heating is produced on natural gas with a boiler efficiency of 100%

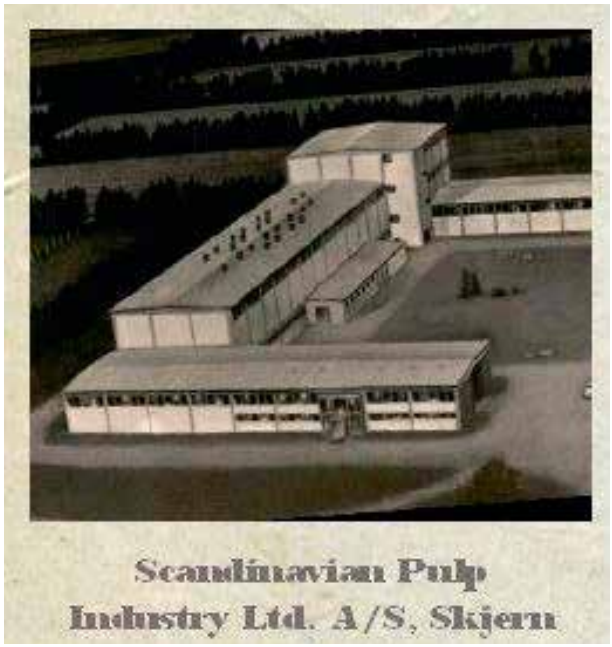
2) It must be assumed there is the same energy demand in connection with steam production on the two boilers

It has been decided that from this report and onwards all key figures will be stated in net tonnes instead of gross tonnes. This is considered to give the most accurate picture of the key figures. What counts »in real world« is how many saleable tonnes are produced compared to consumption of for example energy, auxiliary materials, water, etc.

Therefore, all 5-year key figures in this report have been converted, and also historic data and previous goals are based on net tonnes. Thus there will be discrepancies between historic figures in this report and figures from the sustainability reports of the years concerned. These discrepancies only include the mentioned conversion into net tonnes.

Skjern Papirfabrik through 50 years

In September 2015 Skjern Papirfabrik celebrated its 50th years anniversary. On the same occasion we celebrated our CEO Jørgen Thomsen on his 40th years anniversary, and also 10 years of independence. A total celebration of 100 years took place on September 18, 2015.



Over the years the mill has had different owners.
In 2005 it was bought by Buur Invest and three of the mill's senior management.

Skjern Papirfabrik was founded in 1965 by local investors, who saw the potentials in the recycling of paper and cardboard and creating jobs locally. The mill was located close to Skjern River, which is one of the largest rivers in Denmark. Up to 2014 the river supplied Skjern Papirfabrik with process water.

For the last 10 years large investments are made, which means that Skjern Papirfabrik today belongs to the most eco-friendly mills in the world.

For the last 5 years large investments in green energy projects are made, which among others secure the utilisation of waste heat for district heating production that is supplied to Skjern City's district heating network. The wood chips fired boiler plant, which was built in 2015, will more or less phase out the use of fossil fuels in favour of wood chips. On this boiler plant there is also a heat pump which increases district heating production of the waste heat from the flue gas.

All this is possible thanks to a group of owners who look at long-term perspectives for both economy and environment, and who have the courage to invest large amounts in the right solutions.

1965 was the year, where Skjern Papirfabrik was founded

Employees

At Skjern Papirfabrik the number of employees is very constant. There is a positive tendency that employees stay in their jobs at the mill for many years, and that gives a good stability among the employees and a very experienced work force in all departments.

The mill has 73 employees with the following composition:

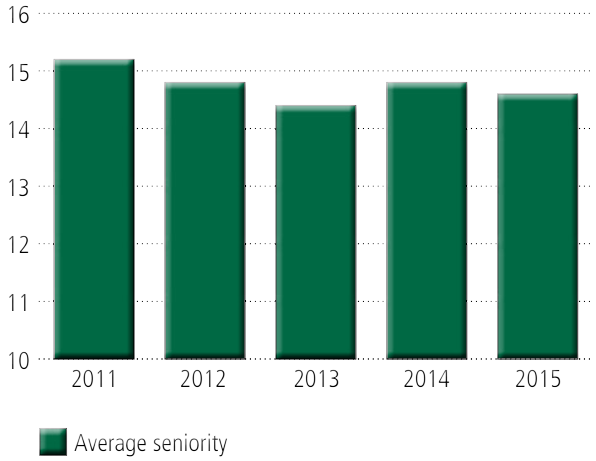
- 4 skilled metalworkers
- 2 automation mechanics
- 51 blue-collar workers
- 16 white-collar workers

Skjern Papirfabrik sees it as a natural part of our activities to treat employees with respect and dignity and thus avoid discrimination. This is a natural thing for a Danish company, and we consider it a contributing factor to our staff's high seniority and thus many employees who celebrate their 25th anniversary.

27.4% **of the staff has been employed for more than 25 years**

Staff turnover in %

Development of seniority



Staff turnover has been increasing for the last 4 years. This is a natural development, as Skjern Papirfabrik has a large number of employees who are around or more than 60 years old. We expect a considerably high turnover still of employees in the years to come.

In Denmark we have many nationalities, and Skjern Papirfabrik sees it as a natural thing to offer people of foreign nationalities work at the mill on equal terms with Danish citizens.

8.2% **of the work force is today people of foreign nationality**

Health and safety

Health and safety is an interaction between the conditions, impacts and relations under which the staff are working. The working environment affects the individual's safety, physical and mental health.

At Skjern Papirfabrik we believe that a good working environment will strengthen the productivity, resulting in a lower sickness absence, higher job satisfaction and more flexibility of the individual employee.

1.6% **was the sickness absence in 2015**

The management and the health and safety organisation both play an active role, just as they have a large responsibility to safeguard a good and safe working environment for all employees. The health and safety organisation at Skjern Papirfabrik consists of 7 health and safety representatives, 3 foremen and the health and safety manager.

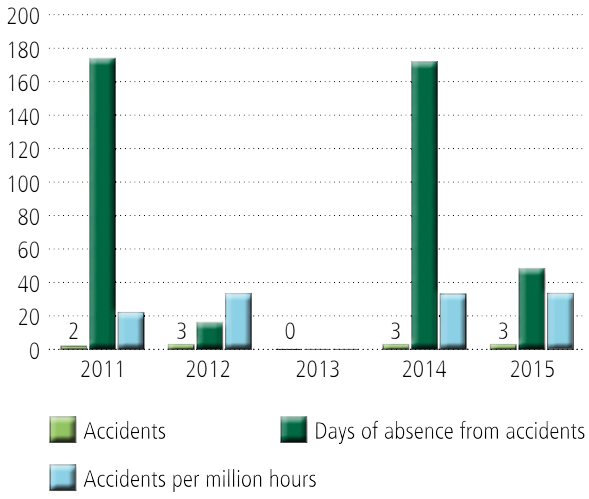
All members attend compulsory health and safety training, when entering the committee, and all members of the health and safety organisation are involved in the daily health and safety activities. The work is an ongoing process with continuous activities to improve the proposals from the workplace assessments.

In 2015 the workplace assessments were updated. Some meetings were held, where the entire staff could present input for risk of accidents, physical, chemical, biological or mental conditions. Altogether this gave us a new work assessment list, which we are going to work with for the next 3 years.

In 2015 a sound insulation was made at the booster and edge cutter, and security at the mill's vargo filters has been improved.

In 2015 3 work accidents were registered. The target of zero accidents was unfortunately not achieved for 2015. On the companys info board the number of days since latest accident is presented.

Development of number of accidents, accidents per million hours and days of absence from accidents



Environmental Impacts

Paper production is known to be a most energy demanding method of production. Therefore, we are proud to use primarily wood chips for the steam production as from the end of 2015. The steam will mainly feed the drying section of the paper machine, which is the main consumer of energy. NO_x emissions will go up as a result of using wood chips as fuel. In return there will be a very large reduction of CO_2.

This reduction will have double effect, as district heating is produced from the heat residues in the flue gas system and in the waste heat in connection with unintended minor stops of the paper machine. The supply of district heating to Skjern City will save CO_2, as the district heating plant would alternatively have to produce extra district heating at their plant.

52% **of Skjern City was in 2015 heated by means of waste heat from Skjern Papirfabrik**

In connection with paper production there are several environmental impacts, which can be divided into direct and indirect ones, respectively. The direct impacts arise as a direct result of the production. Skjern Papirfabrik is constantly working to limit these as much as possible.

The indirect environmental impacts are not directly affected by the production, but primarily consist of the transportation of raw materials and end products. Environmental impacts caused by the collection of waste paper, the production of auxiliary materials and the disposal of products at the end user.

The most significant environmental impacts have been evaluated on the basis of permits, legislation, and the largest possible potential impacts on the external and the local environments.

For Skjern Papirfabrik the most significant environmental impacts are:

- Energy consumption
- Consumption of auxiliary materials
- Water consumption
- Discharge of process wastewater
- Waste management
- Noise

In the company's environmental survey it has been estimated not relevant to perform an assessment of biodiversity.*)

As a positive environmental impact the total CO_2-emissions of Skjern City are reduced by approx. 8,029 tonnes in 2015 in connection with the heating of Skjern City by district heating produced on the basis of waste heat from Skjern Papirfabrik.

*) Total built-up area is 12,469 m^2.

Environmental Policy

For the last 20 years Skjern Papirfabrik has had defined principles and guidelines for the mill's environmental work in the form of an environmental policy.

Environmental policy
In accordance with business and management objectives and approach Skjern Papirfabrik will minimise the impact of the surrounding environment as much as possible. This is achieved by using raw materials and energy in the best possible way, and by reducing emissions produced from the mill's processes.

Skjern Papirfabrik wants to reduce environmental impact by:

- Open communication about the environmental impacts related to the company's processes and products
- Making sure that employees act in an environmentally responsible way, and comply with internal and external rules
- Positive cooperation with supervisory authorities
- Encouraging our suppliers to provide environmentally friendly raw materials, products and services
- Complying with relevant legislation and other requirements that the company has endorsed
- Ongoing environmental improvements, regardless of the fact that the regulatory requirements have already been met
- Environmental assessment of new projects
- Encouraging employees to participate in preventive environmental work
- Making sure that external craftsmen and contractors are aware of and comply with the company's environmental directions
- Ensuring that the buyers of the company's products are informed of environmental considerations in connection with the manufacture, use and disposal of the company's products.

The company will publish the environmental policy in this annual Sustainability Report, which can be found on Skjern Papirfabrik's website.

Foto: Rullevæk

Corporate Social Responsibility, CSR

For many years Skjern Papirfabrik considered it a natural part of our activities to contribute to a harmonic cooperation with the local community. This means among others that we invite local craftsmen to make an offer in connection with large projects.

We have conducted tours at the factory, and for instance educational institutions, associations and municipalities make good use of this offer, wanting to show their students / employees what happens to the recycled paper and thus help them understand how important it is to recycle this important resource.

In recent years Skjern Papirfabrik has also offered Bachelor of Technology Management and Marine Engineering students to complete their finial project in cooperation with Skjern Papirfabrik. During 2015 one student made the final project at the factory. The energy manager acts as mentor for the student in such cases.

The energy manager at Skjern Papirfabrik did in 2015 spread the knowledge of utilisation of waste heat by means of the heat pump technology. This was done by features on project days and conferences all over the country and by receiving visitors from interested companies. The technology is quite new, and as Skjern Papirfabrik is a front-runner the company sees it as part of its social responsibility to contribute to more knowledge in the field.

Furthermore, Skjern Papirfabrik donates money to a number of charity organisations, both for health and social purposes, and to the local sports clubs.

Skjern Papirfabrik encourages the employees to participate in sports arrangements, such as »Tæl skridt« (Count your Steps) and »Vi Cykler til Arbejde« (Ride your Bicycle to Work), or other local events. Partly to support local activities – partly also to improve the employees' health.

22% of the employees at Skjern Papirfabrik participated in 2015 in »Vi Cykler til Arbejde«, thus riding their bicycles to work in May.

In 2013 Skjern Papirfabrik joined the UN Global Compacts principles, and is thus obliged to show an ethically correct execution of business.

Skjern Papirfabrik is an independent company with one production site located in Denmark. In Denmark the respect of human rights, including the dissociation from forced and child labour is an integrated part of Danish mentality, and Skjern Papirfabrik considers this a natural part of operating on an international market. Skjern Papirfabrik complies with Danish law, supporting the above-mentioned. This is also substantiated by Transparency International's yearly report for 2015, where Denmark was again number one, being the least corrupt country in the world.

Skjern Papirfabrik prepared a CSR policy to focus even more on the mill's social responsibility.

CSR policy

Social responsibility is a fundamental element for us as an organisation to appear as a legitimate and responsible company within the industry.

There is an international expectation that companies include social responsibility in their activities.

At Skjern Papirfabrik we are convinced that it also gives us benefits in our business to focus on environmental protection, employee development, health and safety, and other aspects of social responsibility.

Skjern Papirfabrik wants to show Corporate Social Responsibility by:

- complying with existing laws in all respects
- demonstrating transparency and an accommodating attitude also in social areas
- being open for conducted tours for amongst others educational institutions, associations and other interested parties
- supporting association's work in the local community
- making as much effort as possible to employ local craftsmen and contractors to do external work
- demonstrate zero tolerance for corruption
- demanding fair competition and fair trade with customers and suppliers

Skjern Papirfabrik's marked-related advantages are to be found in the supply of good products and services, and never in unethical and illegal sales promotion.

Skjern Papirfabrik joined the UN Global Compact as a natural continuation of the company's activities as a legitimate and responsible company and player on the international market.

Skjern Papirfabrik wants to comply with the 10 Global Compact basic principles by:

- supporting and respecting human rights
- sustaining freedom of association and acknowledge the right to collective negotiations
- dissociating ourselves from forced labour
- dissociating ourselves from child labour
- avoiding discrimination when it comes to conditions of employment
- being environmental responsible
- opposing all kinds of corruption, such as blackmail and bribe

This sustainability report is made to serve as COP reporting to UN Global Compact.

THE GLOBAL COMPACT
WE SUPPORT

Material balance

CO_2 emission due to incineration of natural gas, auto gas and diesel
13,174 tonnes of CO_2

Evaporation of water
31,845 m^3

Recycled paper
58,782 tonnes DM

Energy
94,756 MWh

Auxiliary materials
689 tonnes

Water
339,367 m^3

Finished products
56,700 tonnes DM

Water
307,522 m^3

District heating sales
39,243 MWh

Waste/reject
2,070.6 tonnes DM

Input and output of materials

Recycled paper
58,782 tonnes DM

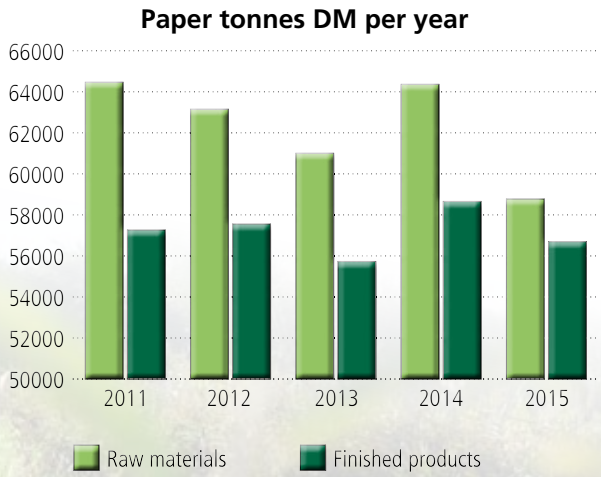
Auxiliary materials
- Production 672 tonnes
- Maintenance and boiler plant 16.7 tonnes

Finished products
56,700 tonnes DM

Waste/reject

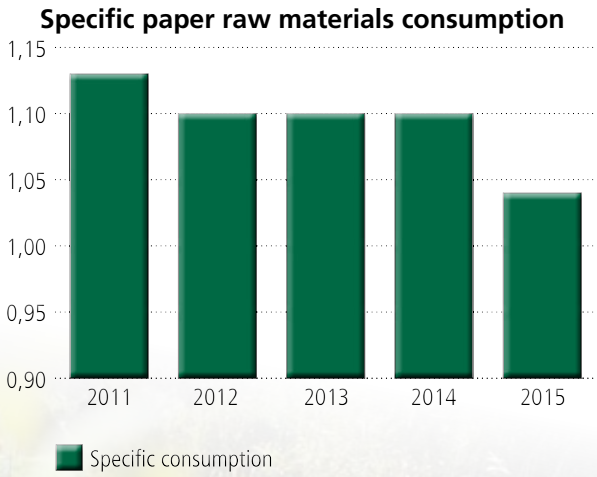
- Waste reject	333	tonnes DM
- Reject for soil improvement	142	tonnes DM
- Combustion	1,425	tonnes DM
- Bottom ashes	15.5	tonnes DM
- Suspended solids	130	tonnes DM
- Hazardous waste	0.15	tonnes
- Metal for recycling	24.9	tonnes

Paper raw materials
The diagram below shows the ratio between the consumption of paper raw materials and the production of finished products.



Fluctuations can be ascribed to variations in moisture content and the amount of impurities in the raw materials.

The diagram below shows the specific consumption of paper raw materials compared to the produced quantity of finished products.



The specific consumption is very constant, lying at around 1.1, which is very common when manufacturing 100 % recycled paper. Fluctuations can be ascribed to variations in the amount of impurities in the raw materials, uncertainties as to moisture content, and a probably better utilisation of the fibres at lower speed on the paper machine.

Input and output of materials (continued)

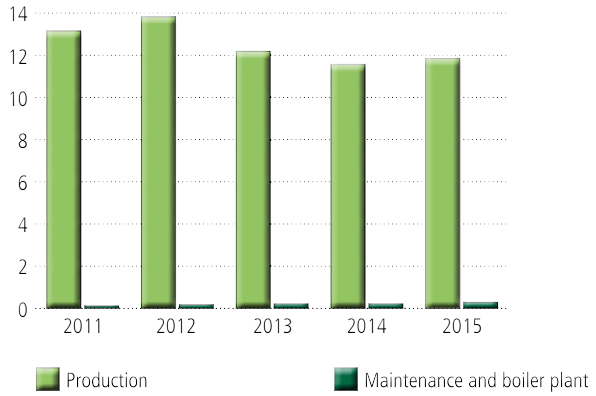
Auxiliary materials

Many auxiliary materials are used at Skjern Papirfabrik, from which the majority is used for the production of paper. The auxiliary materials for production mainly consist of glue to make the paper water-repelling, starch to improve the strength, and some to improve the dewatering. Soap is used - to clean the felts on the paper machine.

However, the largest number of the auxiliary materials are used in the maintenance and boiler plant departments, but in a much smaller amount.

Auxiliary materials in this report are materials with a relatively large consumption, which means that for an example consumption of spray bottles in the welding department are not included. Materials used for maintenance of the production machinery, such as oil, grease and cleaning agents, are included.

Auxiliary materials in relation to produced quantity of paper kg/tonnes DM



The table shows the distribution of auxiliary materials compared to quantity produced. It is to be seen that the consumption of auxiliary materials for production is approximately the same level as in 2014. Deviations are mainly due to changes of the production mix deciding which auxiliary materials must be used, and in which amounts.

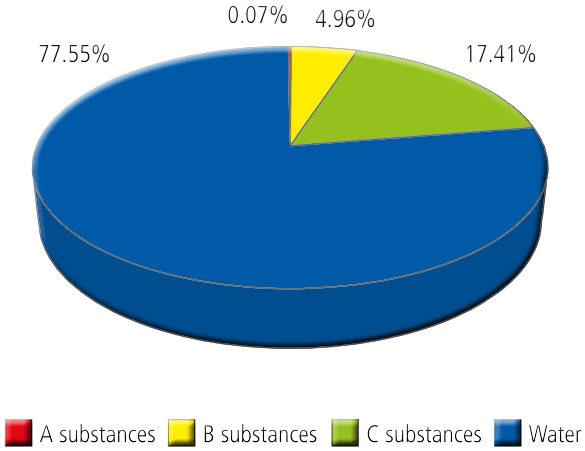
The consumption of auxiliary materials for maintenance and boiler plant went up a little compared to 2014, because the new wood chips fired boiler came into operation by the end of the year. On this plant relatively large quantities of lye are used for neutralisation.

Furthermore, auxiliary materials are used for band filter cleaning of the condensate from the plant, before it is led with the process water to public wastewater treatment. It must be expected that the amount of auxiliary materials for the boiler plant will increase significantly in 2016.

A, B and C substances

The guidelines on environmentally harmful substances in industrial wastewater from the Danish Environmental Protection Agency operate within three categories: A, B and C substances. A- substances are undesirable substances that ought to be replaced or reduced to a minimum. As far as B-substances are concerned there are guidelines for marginal values, and the substances ought to be regulated by the use of the best technology available. C-substances are regarded as unproblematic. The remaining part consists of water or inorganic auxiliary materials.

The distribution in percentages of the total consumption of auxiliary materials can be seen in the figure below:



Only 0.07% of the used auxiliary materials consist of the undesired A-substances

Input and output of materials (continued)

In 2015 a new ABC evaluation was made for all the auxiliary materials mentioned. The new estimate is based on updated safety data sheets and the Danish Environmental Protection Agency's guidelines. This means that some materials might be estimated differently.

The distribution in percentage of A-substances lies at a very low content in 2015, which is primarily due to less use of a specific dye. The mill got a licence to produce larger batches with this dye, in order to obtain less consumption for running-in of the product with dye.

Waste

As far as possible Skjern Papirfabrik tries to utilize the waste from the mill. This means that iron is recycled, waste is sent for controlled composting in order to utilise the fibre content for soil improvement, combustible waste is sent for combustion with heat production, and the bottom ashes from the new wood chips fired boiler will be utilised by spreading it on farm land so the nutrients return to nature.

93.7% of the waste were utilised in 2015

Waste from the mill mainly consists of discarded impurities from paper raw materials containing a number of non-usable materials, such as plastic, paper clips, glass, fabric remnants, etc. These residual products are discarded through several cleaning units.

The term »waste reject« covers waste from the pulper, which primarily consists of metal bands from the paper rolls, plastic and fabric remnants. This fraction is also called the pulper tail, as the waste is wound to a long »tail«, which is drawn from pulper to container. The waste reject is sent for further processing, where the metal parts are sorted out and recycled, and combustible waste is utilised for heat production.

Input and output of materials (continued)

The term »reject for soil improvement« is a waste product primarily consisting of paper fibres mixed with a minor part of styropor and plastic. This waste fraction is transported for composting, before it is used for soil improvement.

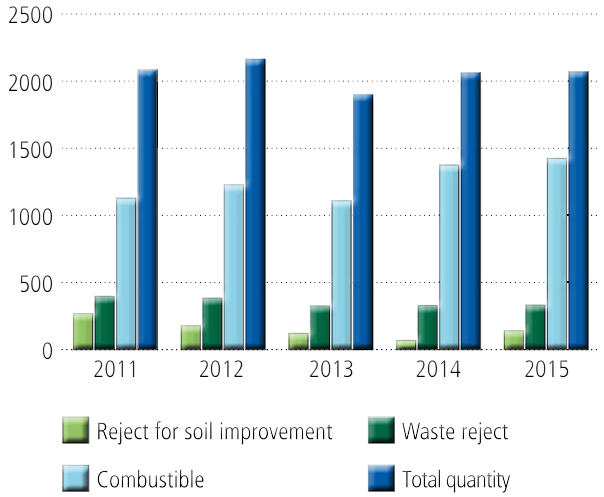
It is to be seen that the quantity of combustible waste has been at a higher level in 2014 and 2015, than has been seen before. It is considered to be due to periods with larger amounts of impurities in the paper raw materials than usual.

The calculation of the total quantity of waste includes the quantity of suspended solids led with the wastewater for municipal wastewater treatment. Suspended solids are estimated primarily to consist of paper fibres so small that they are not retained in the mill's filters.

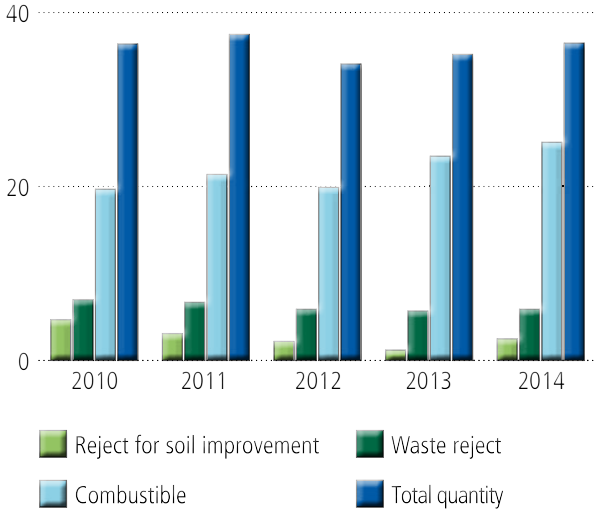
There is for 2015 also a small amount of ashes from the last months of the year, where the wood chips fired boiler has been running.

2015 was the first year without the mill's own wastewater treatment plant, and therefore also the first year where wastewater sludge is not included in the calculation of waste quantities. Therefore, it might be difficult to compare 2015 with previous years as regards waste quantities. It will be easier to compare the figures after 2016, where more stability of waste types from the mill must be expected.

Waste and reject quantities in tonnes DM



Waste and reject compared to produced quantities of paper kg/tonnes DM



Waste quantity must be expected to go up considerably in 2016, partly due to expectations of larger net production resulting in more tonnes of purchased raw materials, which will with the same waste content give an increased total amount of waste.

However, the major reason for the expected increase is a considerably larger amount of ashes from the new wood chips fired boiler in 2016. The ashes is divided into two fractions: Bottom ashes and fly ashes. The mill expects a total of approx. 300 tonnes DM of ashes in 2016.

Water balance

Evaporation
31,845 m^3

Municipal water
14,709 m^3

Water in raw materials
7,864 m^3

Raw water
316,794 m^3

Sanitary wastewater
456 m^3

Water in finished products
3,942 m^3

Wastewater diverted to Tarm Wastewater Treatment Plant
301,391 m^3

Water in waste
1,734 m^3

Notes on specification of volume

Municipal water	Consumption is measured by Ringkøbing-Skjern Forsyning
Water in raw materials	Decided based on measurements of random sampling
Raw water	Consumption is measured by Ringkøbing-Skjern Forsyning
Evaporation	Calculated on the basis of material balance of the water
Water in waste	Decided based on measurements of random sampling
Waste reject	Estimate, as pulper tail is not suited for sampling
Sanitary wastewater	Discharge is measured
Diverted to Tarm Wastewater Treatment Plant	Discharge is measured by Ringkøbing-Skjern Forsyning
Water in finished products	Calculated/measured (6.5 % water content on average)

Water balance (continued)

Water intake

The mill uses primarily unfiltered water from a former municipal drinking water drilling as process water. This water quality is in the report referred to as »raw water«. Ringkøbing-Skjern Forsyning supplies the mill with raw water. The supplies were very stable, and thus no river water was used as process water during 2015.

In addition to raw water a small amount of municipal water is used. This water quality is used for sanitary water, drinking water and at places in the process where completely clean water is needed.

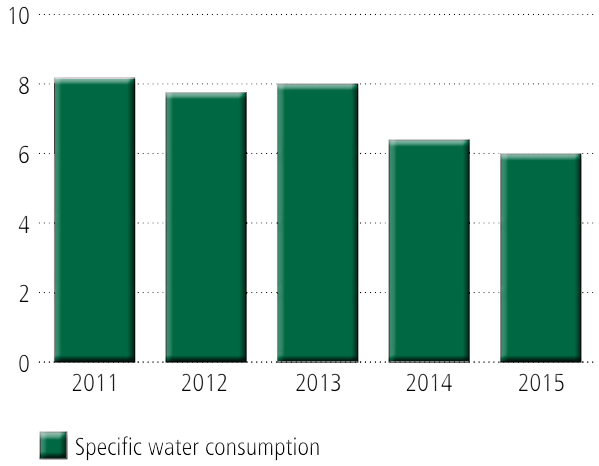
Most of the process water is used through the spray nozzles on the paper machine. Then recycling of the process water starts, as the water is recycled approx. 15-20 times before discharged to the municipal treatment plant. The process water is filtered in vargo filters to retain fibres, before it's recycled or discharged as process wastewater.

In 2015 there was a reduction in water intake of 11.5 %. The target of a reduction of 3 % has been achieved by a very good margin. The reduced water consumption is a combination of more factors: Large focus in general on water consumption in the process, less water discharge from condensate in consequence of a lower gross production. And last, but not least, there are water savings, as the mill's own wastewater treatment plant was closed in 2015.

43,012 m³ was the water consumption reduced in 2015

Water intake and wastewater discharge measured in m³

Water consumption per produced tonne of paper measured in m³/net tonne DM



The above figure shows the specific water consumption for the last 5 years. There has been a reduction of specific water consumption from 6.39 m³/net tonne DM in 2014 to 5.99 m³/net tonne DM in 2015.

Target for 2016

The target is to reduce water intake by another 5,000 m³. This could be realised by achieving an increased recycling of condensate or other wastewater streams.

Water balance (continued)

Discharge of wastewater to public wastewater treatment plant

Wastewater from Skjern Papirfabrik is led to public wastewater treatment at Tarm wastewater treatment plant. Skjern Papirfabrik has its own wastewater pipe between the mill and the wastewater treatment plant, so the process wastewater is led directly into the Tarm plant. The below table shows the required values that the process wastewater from Skjern Papirfabrik must comply with – and the average for analysis results from our self-monitoring for 2015.

Parameter	Required value	Average discharge
Volume of water	1,240 m³/dg	941 m³/dg
pH	6.0-9.0	7.1
SS	500 mg/l	433 mg/l
COD	11,000 mg/l	3,312 mg/l
BOD	6,200 mg/l	1,820 mg/l
Tot-N	20 mg/l	15.4 mg/l
Tot-P	3 mg/l	2.3 mg/l
Chloride	1,000 mg/l	86.2 mg/l
Oil/grease	20 mg/l	9.4 mg/l
Chrome	0.3 mg/l	0.0075 mg/l
Zinc	3 mg/l	0.15 mg/l
Cadmium	0.003 mg/l	0.0006 mg/l
Molybdenum	0.03 mg/l	0.016 mg/l
Lead	0.1 mg/l	0.0133 mg/l

The total wastewater volume was in 2014 330,259 m³. The target for 2015 was to reduce the wastewater volume by approx. 10,000 m³ compared to 2014. In 2015 a volume of 301,391 m³ process wastewater was discharged to public wastewater treatment plant, and a reduction of the wastewater volume by 28,868 m³ was thus realised. The target for 2015 has thus been achieved by a good margin. The major reason for the reduction of the wastewater volume must be found in large focus on the water consumption and the savings because no water is used at the mill's own wastewater treatment plant. However, there is an increased volume of wastewater in terms of condensate from the wood chips fired boiler plant. This volume has been there since the boiler started operating during the last months of the year.

8.7% was the volume of wastewater reduced in 2015

The target for 2016 is to discharge an volume of wastewater of approx. 310,000 m³. This is an increase compared to the volume for 2015. However, the goal must be considered in the light of expectations of an extra volume of wastewater in 2016 of approx. 12-15,000 m³ condensate from the wood chips fired boiler plant.

Energy balance

Electricity for paper production
19,601 MWh

Electricity for heat production
5,592 MWh

Natural gas
63,745 MWh

Wood chips
5,818 MWh

Auto diesel
33,621 L

Auto gas
1,909 kg

Air emissions*)
· CO_2 13,174 tonnes
· NO_x 8.8 tonnes

District heating sales
39,243 MWh

**) relevant emissions according to environmental mapping*

Notes on specification of values

Electricity, natural gas and wood chips	Measured, consumed amount
CO_2 and NO_x	Calculated on the basis of emission factors from the web page of the Danish Energy Agency (CO_2) and key figures according to excise duty instructions (NO_x)
Other emissions	Particles (PM) have not been measured for 2015, as the wood chips boiler was in its start-up phase, and emissions have therefore not been meassured for 2015. It is estimated that emission of CH_4, N_2O, HFC, PFC, SF_6 and SO_2 are of minor importance
Auto diesel and auto gas	Purchased quantity
Electricity for paper production	Incl. consumption for electricity borne heating

Energy balance (continued)

Use of energy

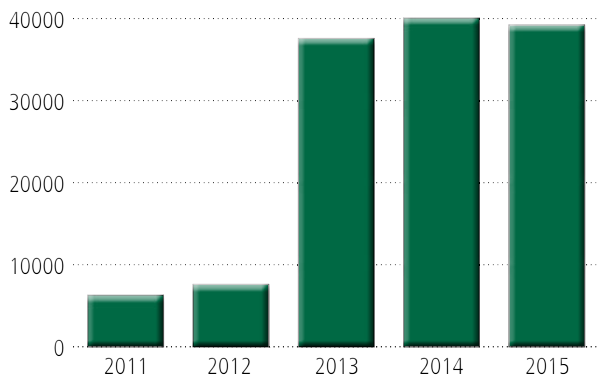
Natural gas and wood chips:	Used for steam production in boilers.
Electricity:	Used for electric motors, trucks, pumps, agitators, ventilators, heat pumps, etc.
Auto diesel:	Used for loader tractors.
Auto gas:	Used for trucks in smaller amounts.

District heating sales

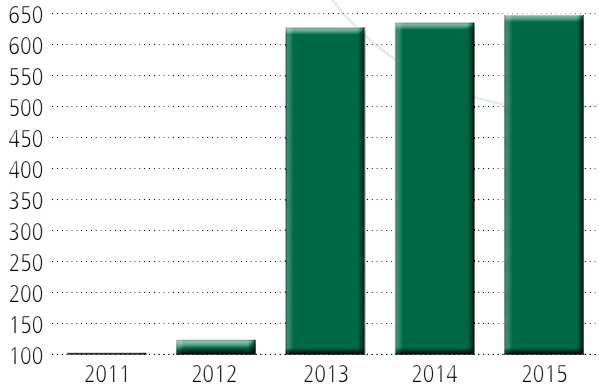
Since 2010 there has been a production of district heating from a gas boiler and from a large heat pump plant built in 2012, utilising the waste heat from the drying unit of the paper machine.

Skjern Papirfabrik has the largest heat pump plant i Denmark. From the end of 2015 the mill started a production of district heating by means of a heat pump, utilising the waste heat in the flue gas from the wood chips fired boiler plant. And also a production of district heating via a surplus exchanger, utilising surplus steam in connection with reduced absorption of steam from the paper machine, for instance in case of web break.

Development in district heating production MWh



Development in specific district heating production kWh/net tonnes



993 kg CO_2

were saved for each citizen in Skjern City in 2015 by utilizing the waste heat at Skjern Papirfabrik for district heating production

534% **increased production of district heating since the first whole year with district heating supplies in 2011**

When looking at the development in specific district heating production it can be seen that there is an increase every year in the utilisation of the waste heat compared to amount of produced net tonnes. This is due to the fact that the mill constantly finds new potentials for utilising waste heat, and efforts are made to optimise the existing district heating production.

Energy balance (continued)

Energy related investments in 2015
The major investment in 2015 was the installation of the wood chips fired boiler plant. The establishment of the plant and the boiler building was the largest investment in the mill's history - of approx. 70 million DKK. The installation of the wood chips fired boiler plant required many resources, both in relation to finances and employees. For that reason other projects were given a low priority in 2015.

The background for the investment is, that the Danish government in 2013 launched an ambitious subsidy scheme (the VE-funds). This supports the distribution of industrial district heating and further use of biomass within the industry, which has made the big investment possible. Subsidies from the VE-fund covers approx. half of the total investment, which reduce the net investment considerably.

approx. 14,000 tonnes CO_2
are expected to be saved every year by using wood chips instead of gas.

During the planning period it was decided to include a heat pump to increase utilisation of waste heat from the flue gas. However, this investment is not included in the VE-funds subsidy scheme. The installation of a heat pump is calculated to give a yearly saving of energy of 10,259 MWh consisting of additional district heating production.

The plant has been constructed as a fully-automatic boiler plant with appurtenant roofed wood chips storeroom and automatic crane facilities. Expected yearly consumption is 27,000 tonnes of wood chips, to be supplied from forests in western Jutland within a range of 40 km. This will increase the yearly lorry traffic to the mill by approx. 1,000 loads, from 7,000 to 8,000. In order to meet traffic-related challenges a turning lane with room for 5-6 lorries was in 2015 established within the same project.

In connection with operation of the plant a considerable share of low temperature waste heat will be developed, which will be utilised by discharge to the local district heating company. The expectations are that with the district heating production from the new wood chips fired boiler plant Skjern Papirfabrik will supply approx. 70 % of the district heating to Skjern City. In connection with the utilisation of the waste heat and the district heating production another storage tank was built, so the mill has now 2 x 1,250 m^3 district heating accumulation at our disposal. The coupling of the 3 tanks – including the tank from Skjern district heating plant – calls for advanced control of the levels in both tanks at the mill. Skjern district heating plant controls the pumping out of district heating from Skjern Papirfabrik's accumulated district heating.

Energy balance (continued)

Target and results for energy 2015
Target and results are described in the following table:

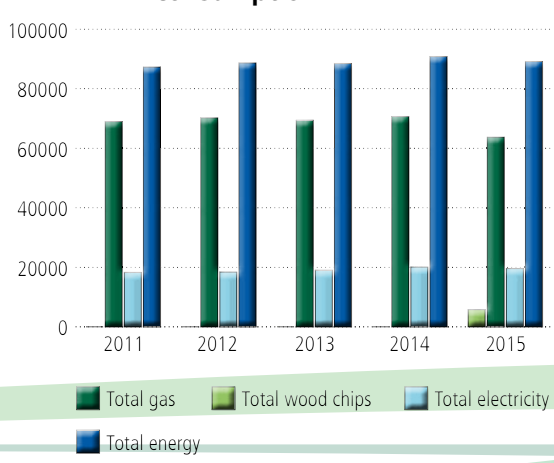
Target and results for specific energy consumption	Target on 31/12-2015	Result on 31/12-2015
Specific electricity consumption	304.8 kWh/ net tonnes	323.2 kWh/ net tonnes
Specific total energy consumption	1374.6 kWh/ net tonnes	1470.3 kWh/ net tonnes

The specific electricity consumption ended 6 % higher than the target, primarily due to a reduced production during a major part of 2015, which has strong influence on the specific energy consumption, both electricity and consumption of fuel for steam production. Furthermore, an optimisation project for a 200 kW exhaustion fan, that was intended to be installed in 2015, has not been implemented, as all available resources were spent on the installation of the wood chips fired steam boiler.

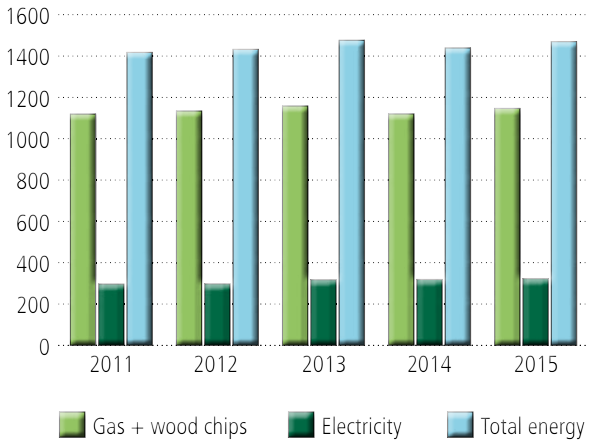
The total specific energy consumption ended 7 % higher than the target, primarily due to the above-mentioned factors and an increased energy consumption in connection with the start-up phase of the wood chips fired steam boiler. This means that for periods of time for start-up and testing, both boiler plants were in operation to achieve full steam capacity. This is a natural part of the start-up process, but it affects the specific energy key figures.

Development in energy consumption
The following two diagrams show the development in energy for the last 5 years, both the specific consumption and the total consumption.

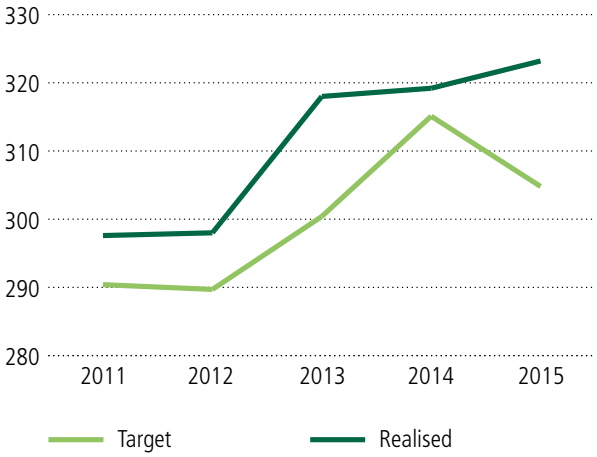
Development in total energy consumption – MWh



Development in specific energy consumption kWh/net tonnes



Development in electricity kWh/net tonnes



Energy balance (continued)

	Specific CO_2 emissions	Specific NO_x emissions
2011	249.7 kg/net tonnes DM	0.128 kg/net tonnes DM
2012	253.3 kg/net tonnes DM	0.129 kg/net tonnes DM
2013	258.7 kg/net tonnes DM	0.131 kg/net tonnes DM
2014	248.7 kg/net tonnes DM	0.127 kg/net tonnes DM
2015	232.3 kg/net tonnes DM	0.155 kg/net tonnes DM

Development in air emissions

Specific CO_2 emissions decreased by 9.7 %, due to transfer to steam production on the wood chips fired boiler plant. NO_x emissions have for the same reason increased by 2.9 %.

1.195 tons CO_2

saved in 2015 as a consequence of using wood chips instead of natural gas during the last months of the year.

Goals and action plans 2016

Also in 2016 there will be focus on fine-tuning of the wood chips fired steam central, and optimisation of the fuel utilisation from this. One of the energy initiatives on the new boiler is that flash steam is recycled from de-aerator and feed water tank on the new boiler plant.

The factory's considerable production of district heating is also an important focus point. Extension of this will have a positive impact on the factory's net energy balance.

The project from 2015 concerning the 200 kW exhaustion fan is transferred. In 2014 a report for the project was made as a bachelor project by two Bachelor of Technology Management and Marine Engineering students. The recommendations stated in the report must be adjusted and executed.

Furthermore, the plan is to spread the positive results from a former pilot project with LED light for the mill's entire lighting.

Global Compact

The report's relation to Global Compact
As a member of the UN Global Compact Skjern Papirfabrik is obliged to be in compliance with the 10 basic principles.

The below table shows the correlation between the report and the 10 principles.

Skjern Papirfabrik has since 2013 been a member of the UN Global Compact and Global Compact's Nordic network.

The Global Compact principles

	The company should:	Pages
Human rights	01. Support and respect the protection of internationally proclaimed human rights 02. Make sure that they are not complicit in human rights abuses	16, 17
Workers' rights	03. Uphold the freedom of association and the effective recognition of the right to collective bargaining 04. Support the elimination of all forms of forced and compulsory labour 05. Support the effective abolition of child labour 06. Eliminate discrimination in respect of employment and occupation	10, 11, 16, 17
Environment	07. Support a precautionary approach to environmental challenges 08. Undertake initiatives to promote greater environmental responsibility 09. Encourage the development and diffusion of environmentally friendly technologies	12-15, 20-32
Anti-corruption	10. Work against corruption in all its forms, including extortion and bribery	16-17

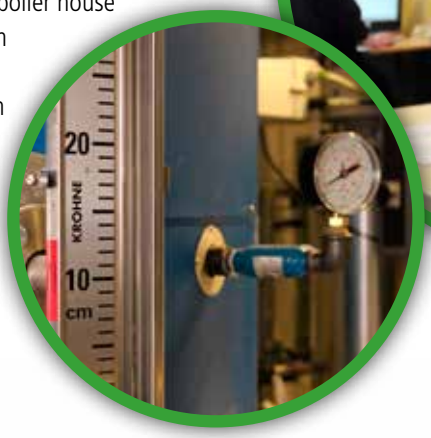
Read more about the UN Global Compact and the principles of the organisation on

www.unglobalcompact.org

THE GLOBAL COMPACT
WE SUPPORT

Glossary

Accredited	Approved
Audit	Verification
Workplace evaluation	Workplace assessment
BOD	Biological oxygen demand during 5 days, also called BI5
COD	Chemical Oxygen demand in wastewater
CO_2	Carbon dioxide
DM	Dry Matter
Emissions	Emissions in air of e.g. NO_x and CO_2
FSC®	Certification based on the use of wood fibres from responsible sources
Required value	Conditions in the environmental approval
NO_x	Nitrogen oxide
RGV	Flue gas heat exchanger
Tot-N	Total amount of nitrogen in a sample
Tot-P	Total amount of phosphorus in a sample
SO_2	Sulphur dioxide
SRO system	Computerised monitoring and management of the operations of the boiler house and heat pump system
SS	Suspended solids from wastewater



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