



Energy and CO₂ Account 2008-2020



First phase of the CO₂ project
ends and a new one starts...



We bring phase 1 to an end



Since 2008, C.C.JENSEN A/S has worked efficiently to reduce CO₂ emissions, and has had good success with becoming CO₂ neutral according to the decided scope. Still, it is possible to reduce energy consumption, and fossil fuels can be converted to green energy sources.

The accounts show a comparison of our CO₂ emissions over the years, development in the consumption of the various energy sources, and the energy consumption at the various locations in the years 2008-2020.

In 2020, the main message is that the CO₂ emissions have decreased by 2.4%, when emissions from passenger transport and the CO₂ neutral electricity production from the wind turbines and the solar panels is excluded. However, the cause is not to be found in the real reduction of the energy consumption, as we have increased production and had an extraordinarily high consumption of natural gas in Hesselager. The cause can be found in a change in the factors that the CO₂ emissions are calculated on the basis of. For example, the conversion factor for natural gas is reduced by 15% because of increased use of biogas in Denmark.

If wind turbines, solar panels and transport are excluded, the CO₂ emissions are now at 19% of the 2008 level, where the project was started - a significant result.

In 2020, there have been three projects running:

- Preparations have been made for incorporation of a new furnace in the filter disc production in Hesselager
- Windows have been changed in the administration building at Rødeledsvej 60
- In shipping, the first step with three air-to-air heat pumps have been installed at Rødeledsvej 70.

The electricity production from the wind turbines increased by 1.2%, and for the solar panels it increased by 6.8%. In total this gives an increase of 1.2% compared to 2019.

We consider it unique, that C.C.JENSEN is able to keep the position as a CO₂ neutral company measured at production and office. It makes us relevant for both customers, suppliers and employees. But at the same time, we must say that there is more to be gained in an expanded scope.

In 2018, we started to measure the CO₂ emissions from passenger transport, and with good help from the global Covid-19 pandemic, we succeeded in reducing the emissions from transport by 318T CO₂ in 2020. In 2020, the total emissions from transport were 196T CO₂, and we will strive to keep a low level also after the pandemic is over. Both C.C.JENSEN and the customers have gotten use to a new normal, where virtual meetings give a good dialogue and create basis for cooperations.

The largest future technical improvement projects will be in Hesselager, where we also consume most of the energy. As an example, we work on the conversion of drying processes from steam to heat pumps. In the rest of C.C.JENSEN, focus will be to replacing the remaining gas heating with heat pumps, where possible.

In 2020, C.C.JENSEN had a break-through with energy saving motors on our products. Generally, customers have accepted the solution, also due to new legislation. We have been able to document a significant CO₂ reduction in the marine industry by replacing centrifuges with CJC™ offline filtering, and here we expect to achieve significant results in terms of saved CO₂.

Over the last years, C.C.JENSEN has reached a plateau in the CO₂ project. We will now set a new baseline and include a wider scope, while respecting the history of the project. It will make us able to help our customers, when we can report the part of our CO₂ that is used outside our own sites.

We would like to say thanks to everyone in C.C.JENSEN A/S, who has contributed to the project throughout the last 13 years.

Steering Group



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Stig Due



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Jens Fich



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Main Conclusions 2020

CO₂ emissions for the locations

Despite an increasing energy consumption in C.C. JENSEN from 2019 to 2020, the total CO₂ emissions decreased by 2,4% (the number excludes wind turbine and solar panels) to 439 tonnes CO₂. This corresponds to a decrease of 10,647 kg CO₂.

The main reason for the decrease is a reduction in the CO₂-emissions from the various energy sources used. As an example, the conversion factor for natural gas is reduced by 15% because of increased use of biogas, and this is reflected in the increased consumption of natural gas in Hesselager. The actual energy consumption has increased for all energy sources.

- **Hesselager** has increased CO₂ emissions by 71,033 kg CO₂ (electricity increased by 6.6%, wood pellets consumption increased by 8.7% and natural gas increased by 171.3%). The production measured in kg cellulose increased by 4%.
- **Rødeledsvej 60** has contributed with reducing CO₂ emissions by 31,552 kg CO₂ (the electricity consumption decreased by 7.6%, natural gas decreased by 25.2%).
- **Rødeledsvej 70** has contributed with reducing CO₂ emissions by 21,845 kg CO₂ (electricity increased by 25.4%, natural gas decreased by 3.7%).
- **Løvholmen 9-13** has contributed with reducing CO₂ emissions by 22,791 kg CO₂ (electricity increased by 5% and natural gas decreased by 5.1%).
- **Abildvej** has contributed with reducing CO₂ emissions by 2,238 kg CO₂ (electricity is roughly the same as last year, og natural gas increased by 2.2%).
- **Løvholmen 18** has increased CO₂ emissions by 1,930 kg CO₂ (electricity decreased by 0.3% and district heating increased by 1.8%).
- **Tværvej 23-25-27** has decreased CO₂ emissions by 5,182 kg CO₂ (electricity decreased by 3.1%, natural gas decreased by 2.6%, and the wood pellets consumption increased by 10.3%).

GO₂Green

Besides the initiatives taken internally at C.C.JENSEN, we are initiator of and partner in the climate initiative GO₂Green, working to reduce energy consumption and create green jobs in southern Funen.



Wind turbines and solar panels

Electricity production from wind turbines increased by 1.2%, and also the production from solar panels increased by 6.8%. In total, it is an increase by 1.2% when compared to last year (40,065 kWh).

Now, the total production of electricity from wind turbines and solar panels is 3,248,227 kWh, which is equivalent to 88% of our total electricity consumption. Converted to CO₂ emissions, the electricity production corresponds to 438,511 kg CO₂.

Employees

The total number of employees increased by 1% (204 employees in 2020 compared to 202 employees in 2019).

Passenger transport

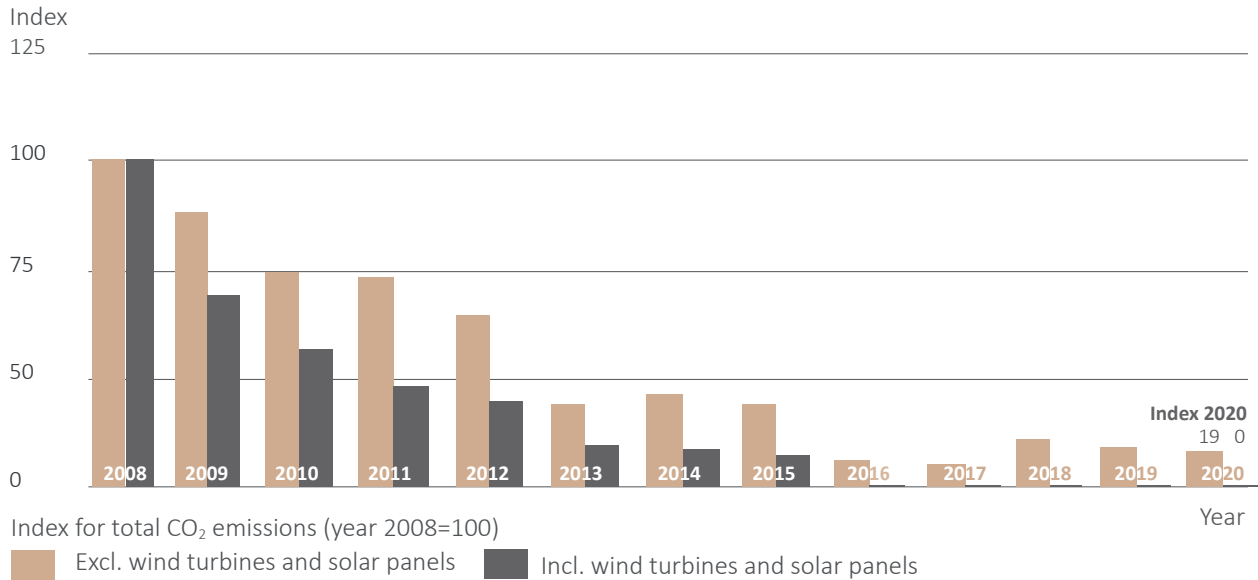
Now, CO₂ emissions from transport for C.C.JENSEN A/S has been registered for 3 years, and is clearly affected by the Covid-19 pandemic in 2020, since the total emissions have decreased from 514.1 tonnes CO₂ in 2019 to 196.6 tonnes CO₂ in 2020.

The decrease is caused by less air transport, which has dropped from 339.3 tonnes CO₂ to 24.3 tonnes CO₂, while car transport is roughly unchanged.

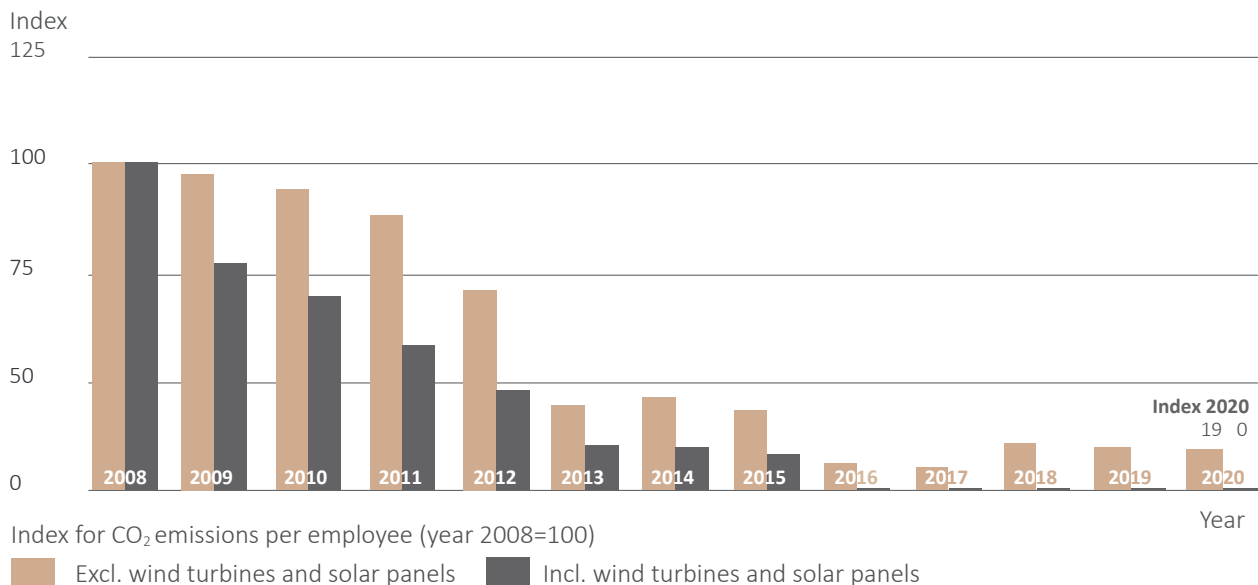
Four of the service vans are powered by electricity, and therefore carbon neutral in operation. Generally, electric cars are a good opportunity to reduce CO₂ emissions in transport at C.C.JENSEN.

CO₂ Development excl. passenger transport

Total CO₂ emissions per year



CO₂ per employee per year



Reduction

CO₂ emissions have been reduced continuously since 2008 - both in terms of total CO₂ emissions and in terms of CO₂ emissions per employee. In 2020, it fell slightly further, mainly due to changes in CO₂ emission calculation factors.

Since 2016, the sum of electricity from own wind turbines and solar panels converted to CO₂ and purchased green wind turbine electricity has exceeded C.C.JENSEN's total CO₂ emissions from consumption. Therefore, the index figure for the figures including these is zero.

Energy & CO₂ Saving Projects

The Steering Group works closely with department heads on the ongoing projects. There are still major savings to be made, which can accumulatively reduce CO₂ emissions for the entire business.

Location	Project	Timing
Rødeledsvej	Plaster ceilings and insulation at model carpentry & warehouse	Concluded 2016
Rødeledsvej	Insulation at casting - room for storage of ISO pipes etc.	
Rødeledsvej	Changing 1-layer windows to thermo windows in casting	
Subsidiaries	Pass on experience from Svendborg to subsidiaries	
Løvholmen 9	2 new electrical vans for the maintenance department	
Abildvej	Insulation	
Hesselager	Replacement of wood pellets with wood chips (step 1)	Concluded 2017
Hesselager	LED lights in hall 4	
Rødeledsvej	Exchange of oil furnace with district heating	
Rødeledsvej	Insulation and lighting optimization	
All locations	Energy Audit	
All locations	Employees are offered a free energy audit of their homes	
Løvholmen 11	LED lights in standard filter factory	Concluded 2018
Løvholmen 11	Ventilation control in standard filter factory	
Løvholmen 18	LED lights	
Rødeledsvej 60	LED lights in welding workshop	
Rødeledsvej 60	LED lights in SFU department	
Rødeledsvej 70	LED lights in service and test department	
Hesselager	Faster runtime dry zone Hesselager	Concluded 2019
Rødeledsvej 60	Gas boiler in SFU Rødeledsvej 60 replaced by heat pump	
Rødeledsvej 60	Changing of windows in the administration building	Concluded 2020
Rødeledsvej 70	Installation of air-to-air heat pump in shipping department	
Hesselager	New furnace in filter disc production in Hesselager	In progress
All locations	Reduction in CO ₂ from transport	In progress
All locations	Phasing out of natural gas as a heat source	In progress
All locations	Reduction of products' energy consumption	In progress
Hesselager	Optimization of steam drying	In progress

Your ideas

Where do YOU think we can reduce energy consumption?

The best ideas are rewarded!

Send your suggestions to lq@cjc.dk

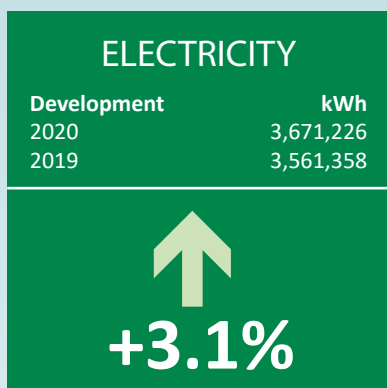


Development of the Energy Sources

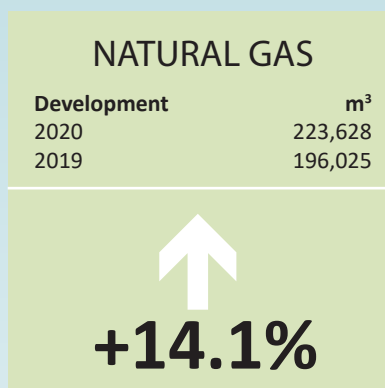
2019-2020

After eliminating oil-based heating in 2017, the focus is now on eliminating the use of natural gas for heating. In 2020, we have experienced an increase in the consumption of all energy sources. The wind turbines produce more than ever, and it has been a sunny year with increased production from the solar panels.

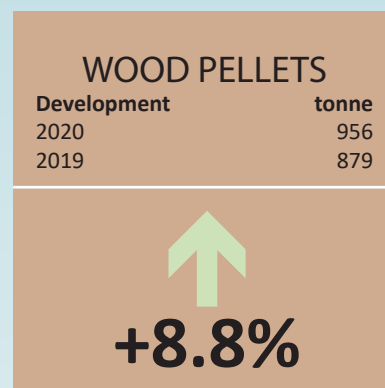
An increased production in Hesselager has led to an increase in the energy consumption, and no significant CO₂ improving projects have been implemented in 2020 in Hesselager.



Hesselager represents the largest increase (128,677 kWh). The largest reduction is at Rødeledsvej 60, where the consumption is reduced by 74,542 kWh.

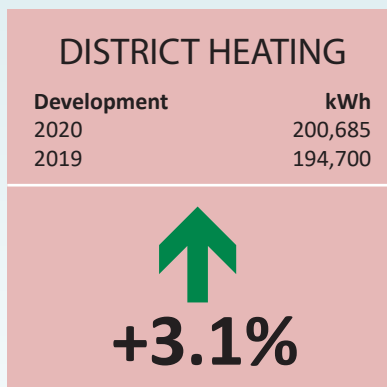


Hesselager's natural gas consumption has increased by 171.3%, corresponding to 43,477 m³.

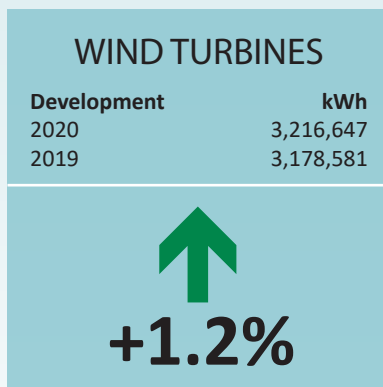


The consumption of wood pellets has increased in all locations, where it is used.

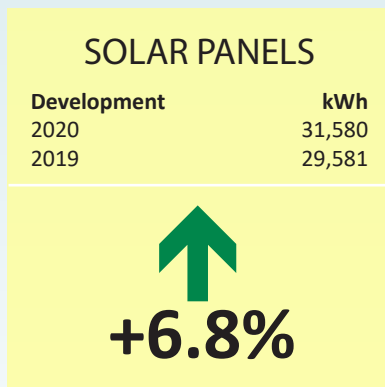
ELECTRICITY PRODUCTION



77% of the increase in district heating can be linked to Rødeledsvej 60.



The production of electricity by the wind turbines increased by 38,066 kWh.

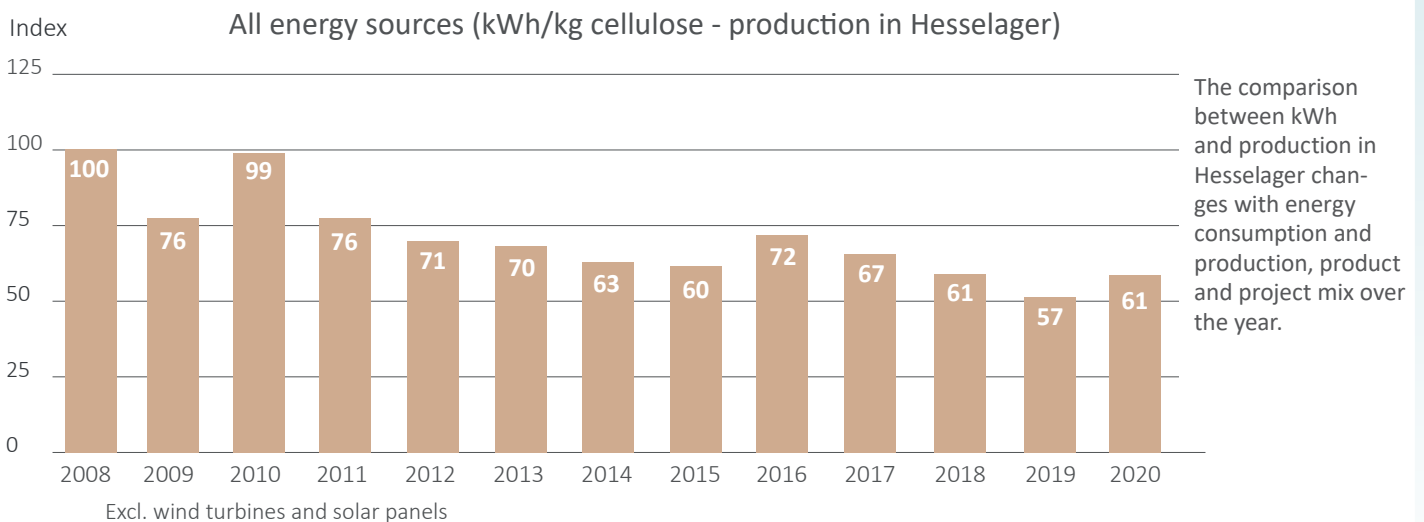
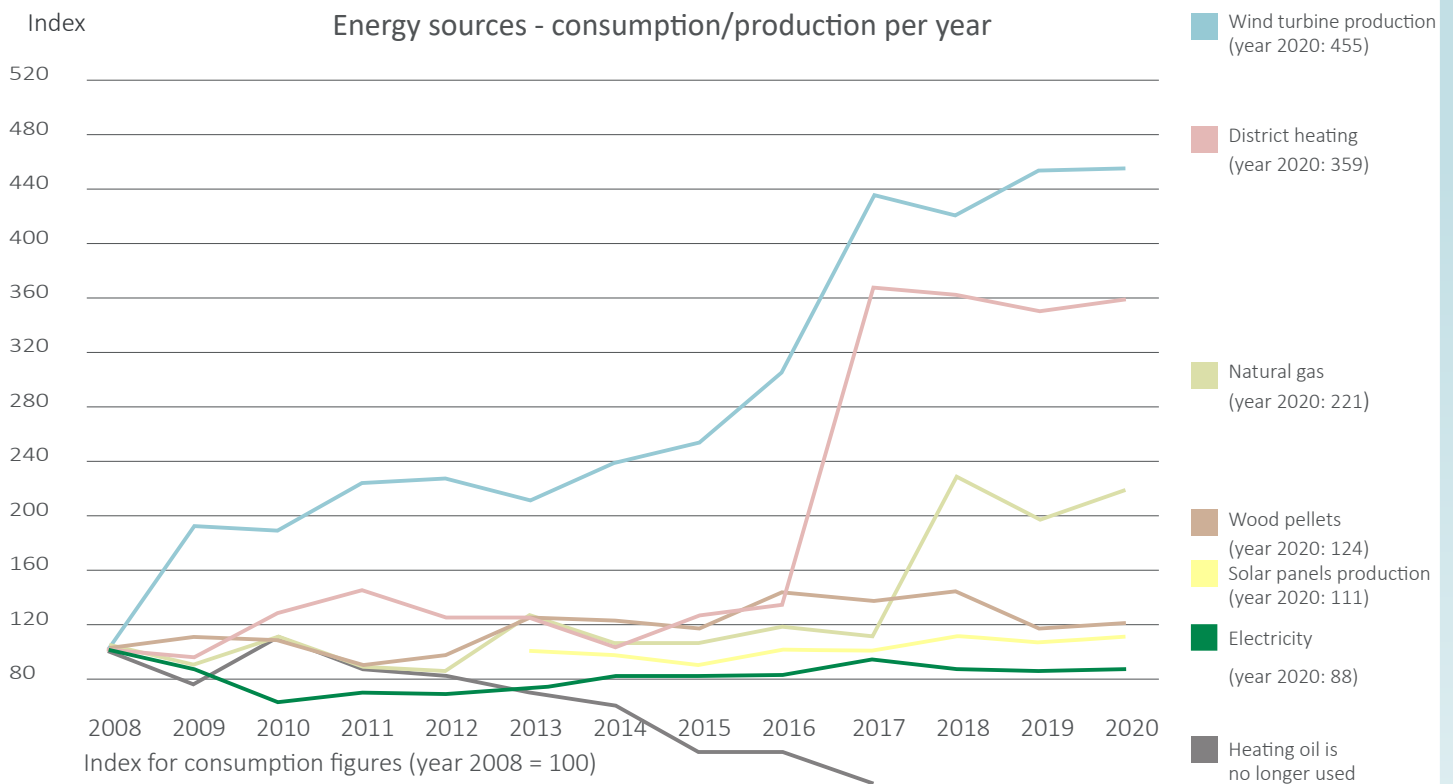


Electricity from solar panels is 11% of the electricity consumption at Løvholmen 9-13.

The total number of employees has increased by 1%, equal to 2 employees more from 2019 to 2020.



Energy Sources since 2008



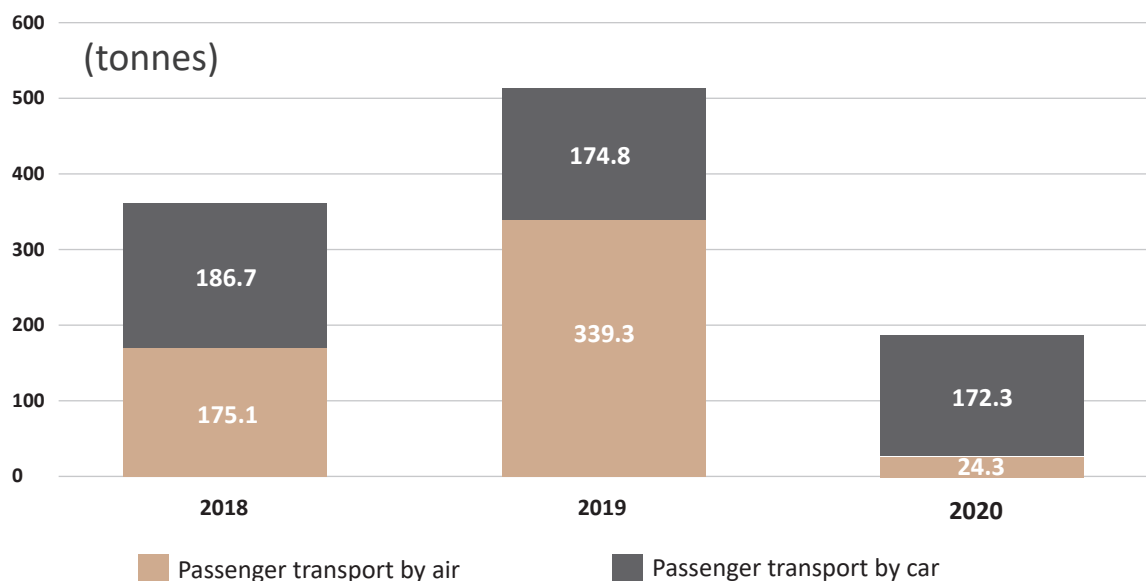
Energy Sources

Because of an increase in production, which is basically a good thing, the consumption of all energy sources has increased from 2019 to 2020

- The significant increase in the consumption of **natural gas** is due to an increase in **Hesselager**.
- In 2019, the electricity production of the **wind turbines** increased by 1.2%.
- In 2020, **the solar panels** have produced more power, which matches with significantly more sunshine hours in 2020 (1,819 hrs) than in 2019 (1,729 hrs).

Passenger transport

CO₂ emission from passenger transport



Helped by the global Covid-19 pandemic, passenger transport by air has been reduced significantly. Largely, the passenger transport by car is unchanged. The world is getting used to virtual meetings, and we expect this trend to continue. Emissions from passenger cars will be reduced as electric cars are procured.

We make an effort to maintain and develop the company by always making things a little better. When we save CO₂, we also create the opportunity to invest in the company, which leaves room for the next generation of CCJ employees, which is why passenger transport is also important.

We can still save energy and it is you who can discover the potential CO₂ savings. You see them every day, but maybe you just don't notice them.

Open your eyes to the potential, and **send your**
CO₂ saving ideas to Lars Qvistgaard, lq@ccj.dk



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