

Climate Account for SDU 2017-2021

Introduction

SDU's climate account is produced using the GHG Protocol. The Paris Agreement obliges countries to reduce greenhouse gas emissions in order to keep global temperature rise below 2 degrees Celsius and to strive to keep it below 1.5 degrees Celsius in order to avert the worst effects of climate change.

The GHG Protocol arose out of the need to help countries, companies and public institutions account for, report and reduce greenhouse gases. Today, it is a globally used and recognised method that is also used by other universities in Denmark and around the world.

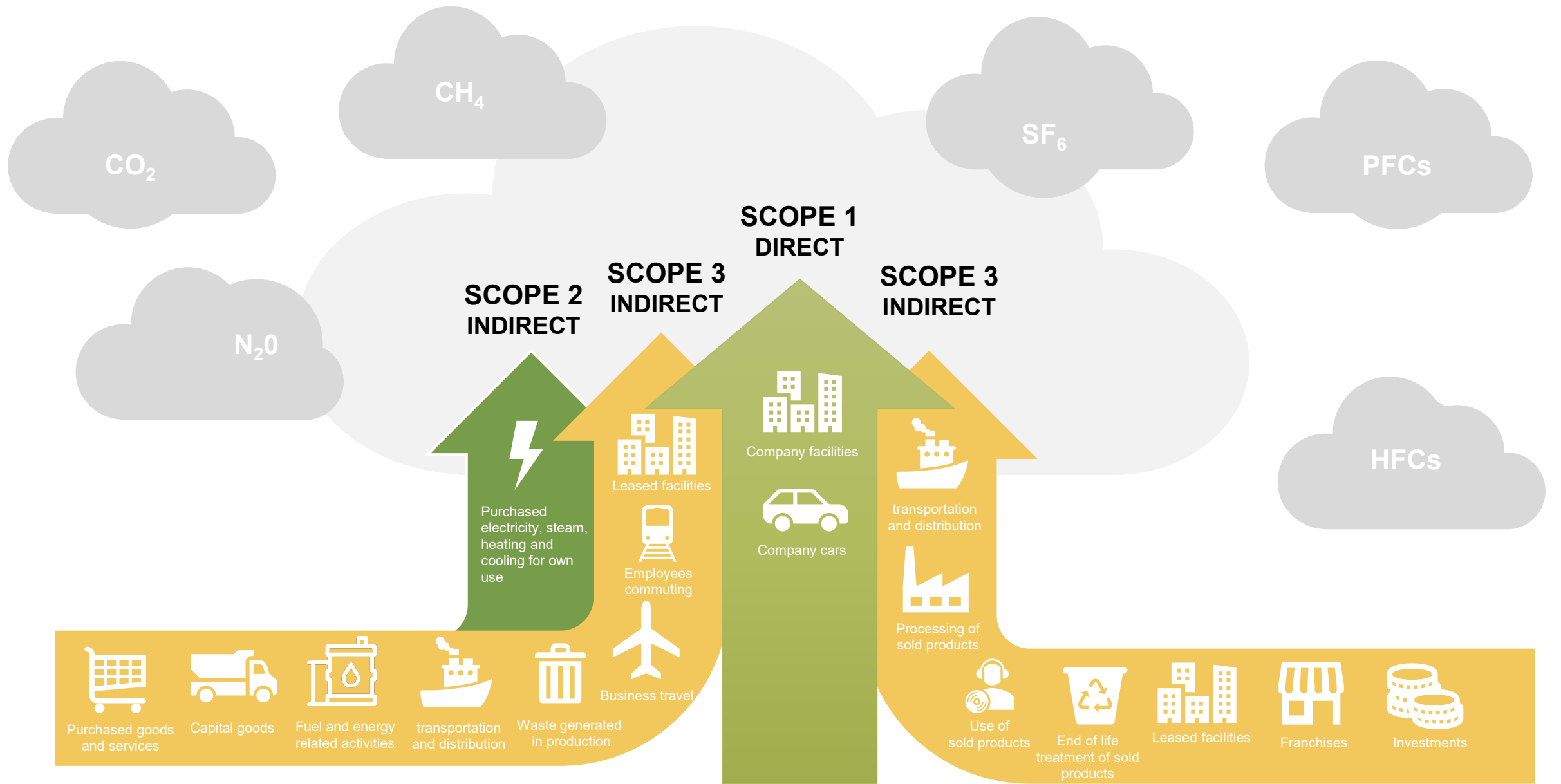
The GHG Protocol uses three scopes. The goal of a 57% reduction in 2030 compared to 2018 applies to the emissions that we are certain we can calculate and quantify, and they include those that fall under scope 1 and 2 as well as parts of scope 3 in the GHG Protocol.

Scope 1 is the direct emissions from SDU's property from, e.g. own heat production, emission of greenhouse gases from own laboratories, driving in SDU's service vehicles and employees driving their own cars during working hours (i.e. not commuting to and from work). Scope 2 is the indirect emissions caused by electricity and heat purchased and consumed by SDU. Scopes 1 and 2 are included in full.

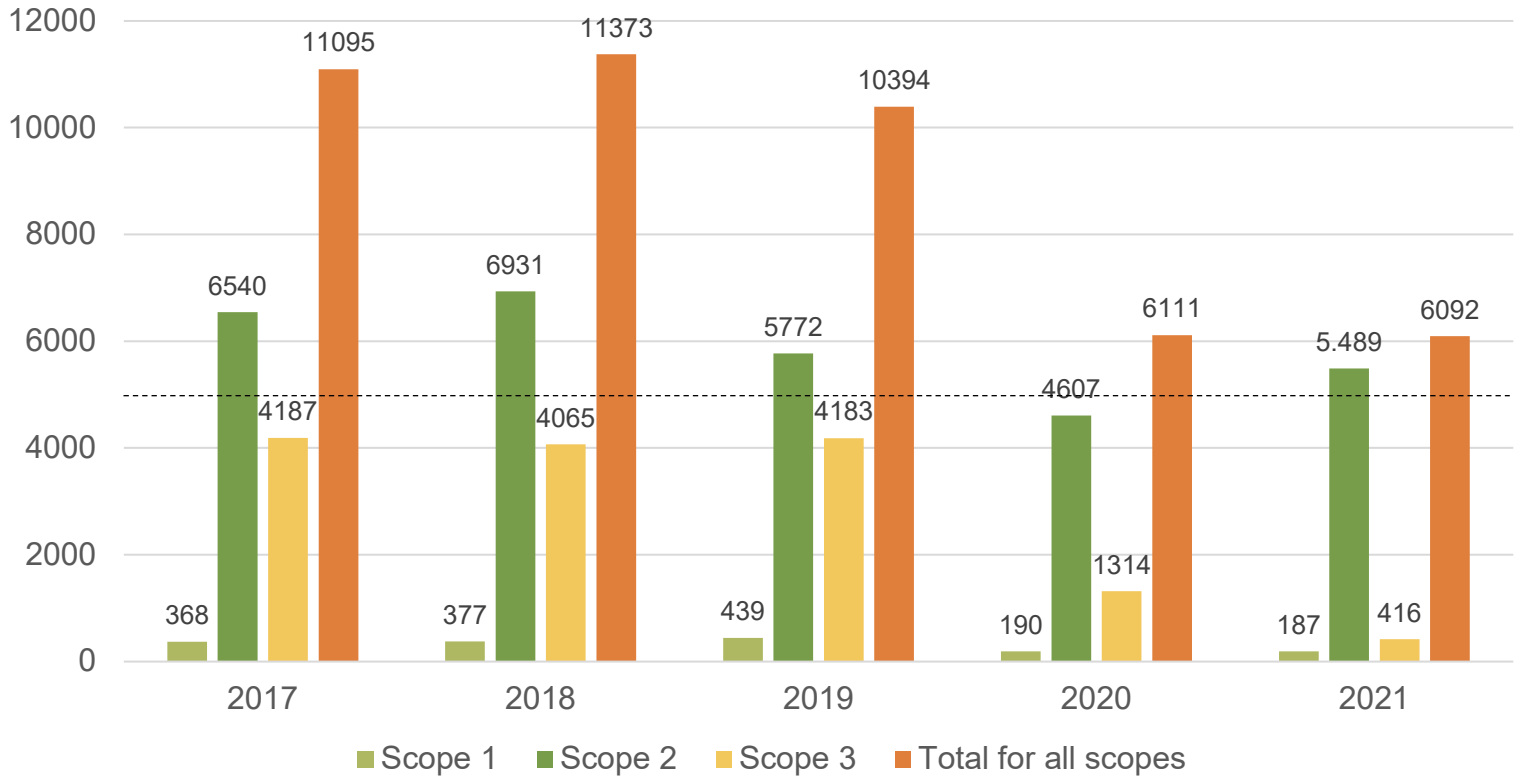
Scope 3 is emissions related to SDU's procurement, use and disposal of goods and services (value chain). Scope 3 currently includes work-related air travel, rail travel and taxi trips. As the University gains better insight into the carbon footprint from various sources in scope 3, there may also be a need to define goals and initiatives for other areas in scope 3.

SDU participates in a cross-sectoral collaboration with the other Danish universities with a focus on developing a common framework for climate account reports for universities.

In the following, the term CO₂ equivalent is used. The CO₂ equivalent is a conversion factor for comparing the impact of different greenhouse gases on the greenhouse effect. In this way, it has been calculated how many tonnes of CO₂ it takes to create the same effect as one tonne of another gas. This number is then the CO₂ equivalent of the gas.



Emissions for each scope and in total



The figure shows the emission in tonnes of CO₂ equivalents recorded for scopes 1, 2 and 3 and in total for all three scopes for the years 2017–2021. The dotted horizontal line represents the target for 2030, when the total emissions of SDU may not exceed 4,890 tonnes of CO₂ equivalents.

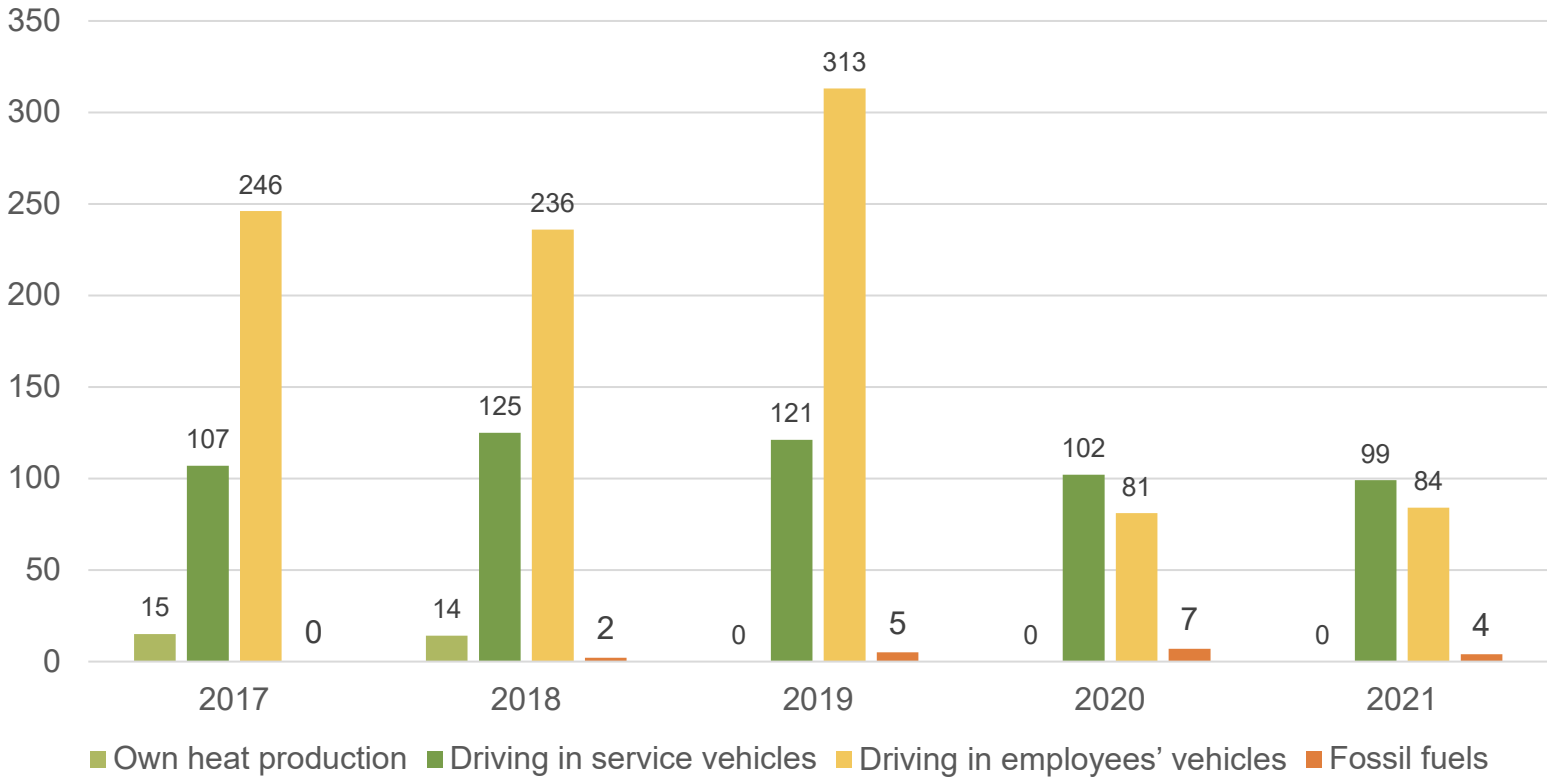
When reading the figure, one should be aware that 2020 and 2021 differ from the other years due to the lockdowns that followed as a result of the COVID-19 pandemic.

The lockdowns caused a substantial reduction in the volume of air travel, which explains the significant reduction in emissions associated with scope 3.

If in 2021 the scope of air travel and other transport activities in scope 3 had been on par with the years 2017–2019, the total emissions in 2021 would have been around 9,800 tonnes of CO₂ equivalents.

At the same time, it should be noted that the lockdowns in 2020 and 2021 appear to have had limited impact on scope 2, which is the indirect emissions caused by electricity and heat sourced and consumed by SDU.

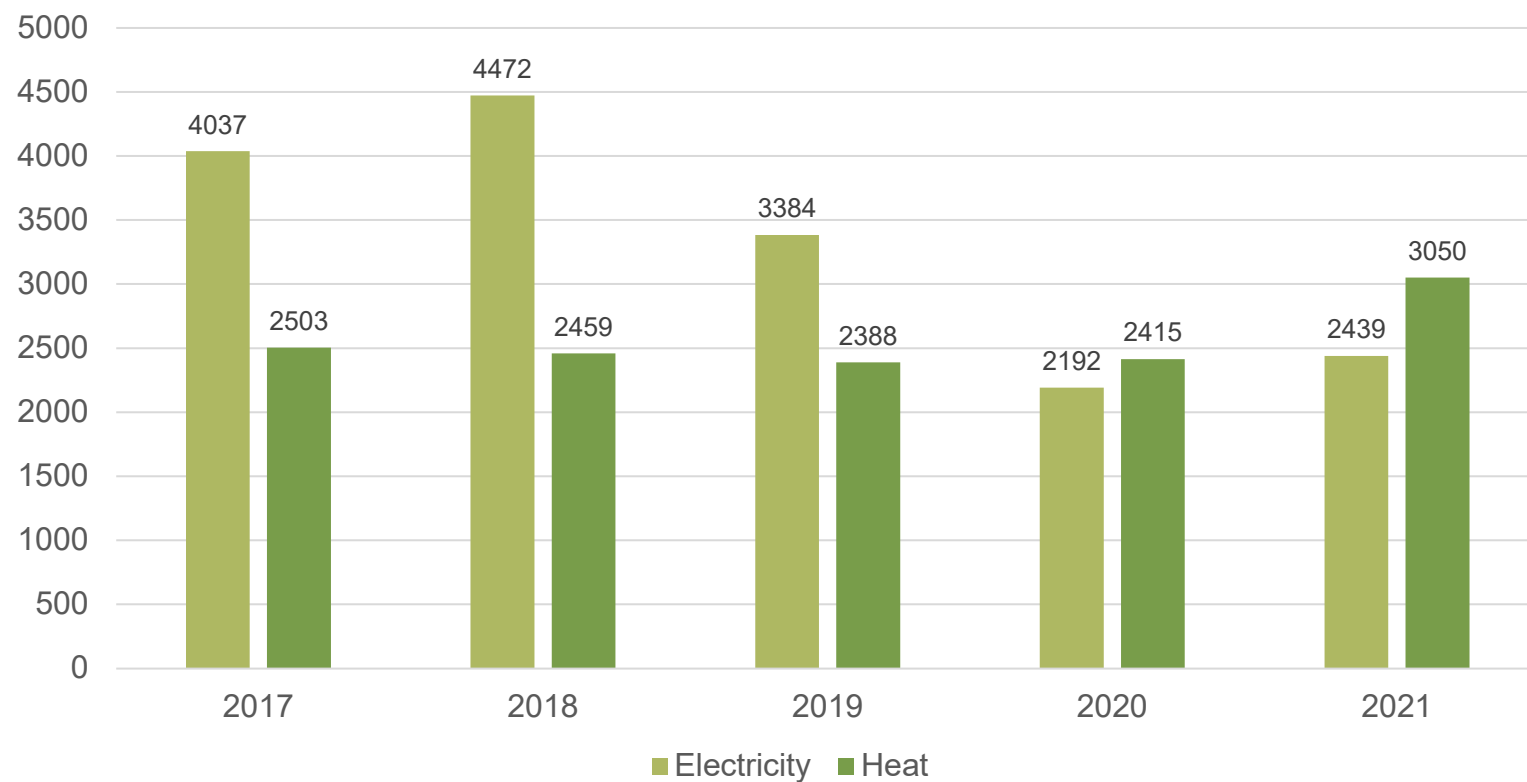
Emissions for scope 1



The figure shows the emissions in tonnes of CO₂ equivalents recorded for scope 1 for the years 2017–2021.

Scope 1 is the direct emissions from SDU's property from, e.g. own heat production, emission of greenhouse gases from own laboratories, driving in SDU's service vehicles and employees driving their own cars during working hours (i.e. not commuting to and from work).

Emissions for scope 2



The figure shows the emissions in tonnes of CO₂ equivalents recorded for scope 2 in the years 2017–2021.

Scope 2 is the indirect emissions caused by electricity and heat purchased and consumed by SDU.

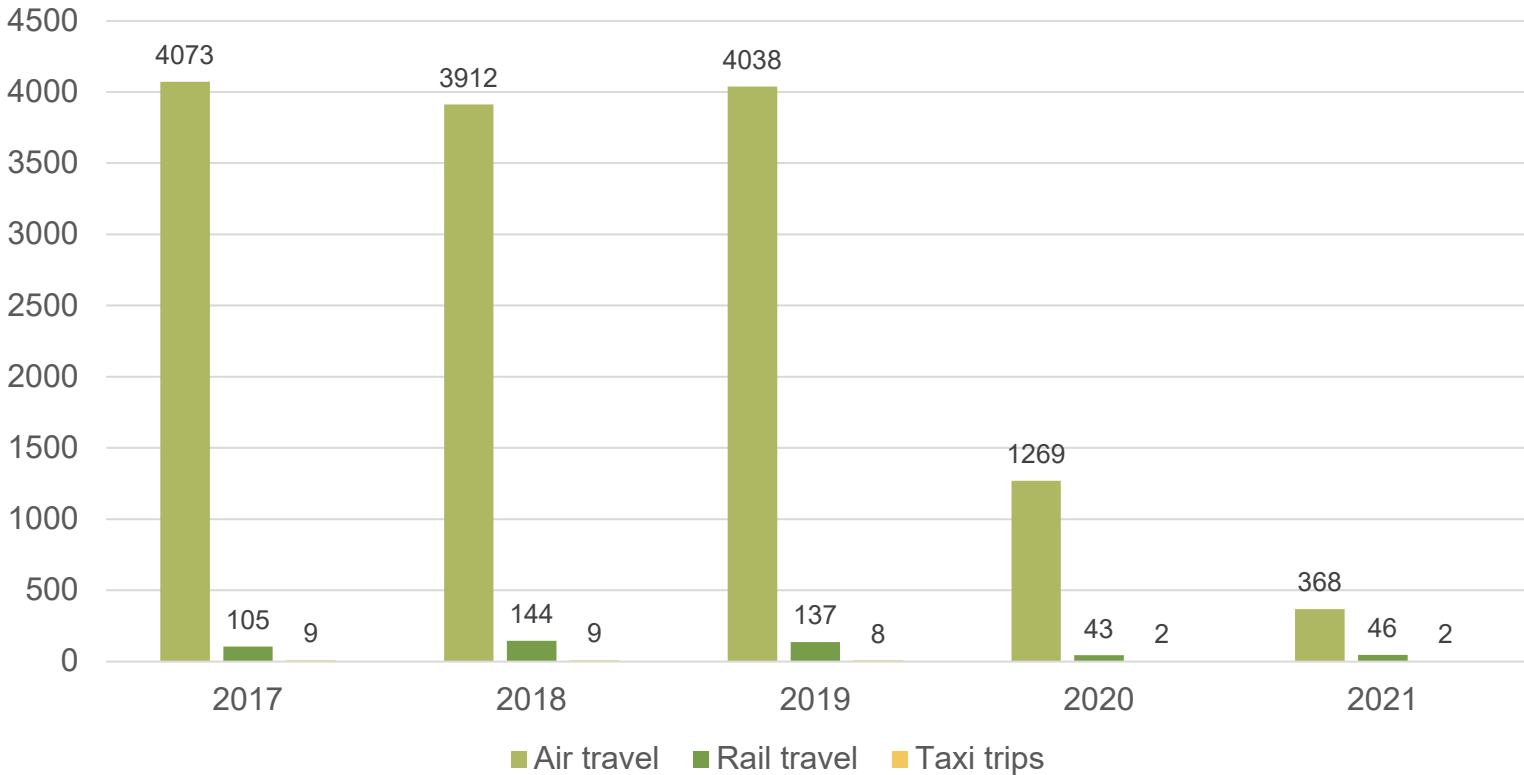
In the assessment of CO₂ emissions of heat and electricity respectively, you can choose the 125% or 200% method.

If you choose the 125% method, a greater proportion of emissions is placed on heat output, while 200% places a greater proportion on the electricity side.

However, the overall emission is the same.

For the years 2017–2019, the 200% method was used, while the 125% method has been used for 2020 and 2021, as it is the recommendation of the working group set up by Danish Universities.

Emissions for scope 3



The figure shows the emissions in tonnes of CO₂ equivalents recorded for scope 3 in the years 2017–2021.

Scope 3 is emissions related to SDU's procurement, use and disposal of goods and services (value chain). Scope 3 currently includes work-related air travel, rail travel and taxi trips.

As the University gains better insight into the carbon footprint from various sources in scope 3, there may also be a need to define goals and initiatives for other areas in scope 3.

The lockdowns due to COVID-19 in 2020 and 2021 have caused a significant reduction in the volume of air travel, which explains the significant decline in emissions associated with scope 3.