

OR Annual report 2020

Appendices



GHG emission goals 2015-2030 and the achievement towards the goals



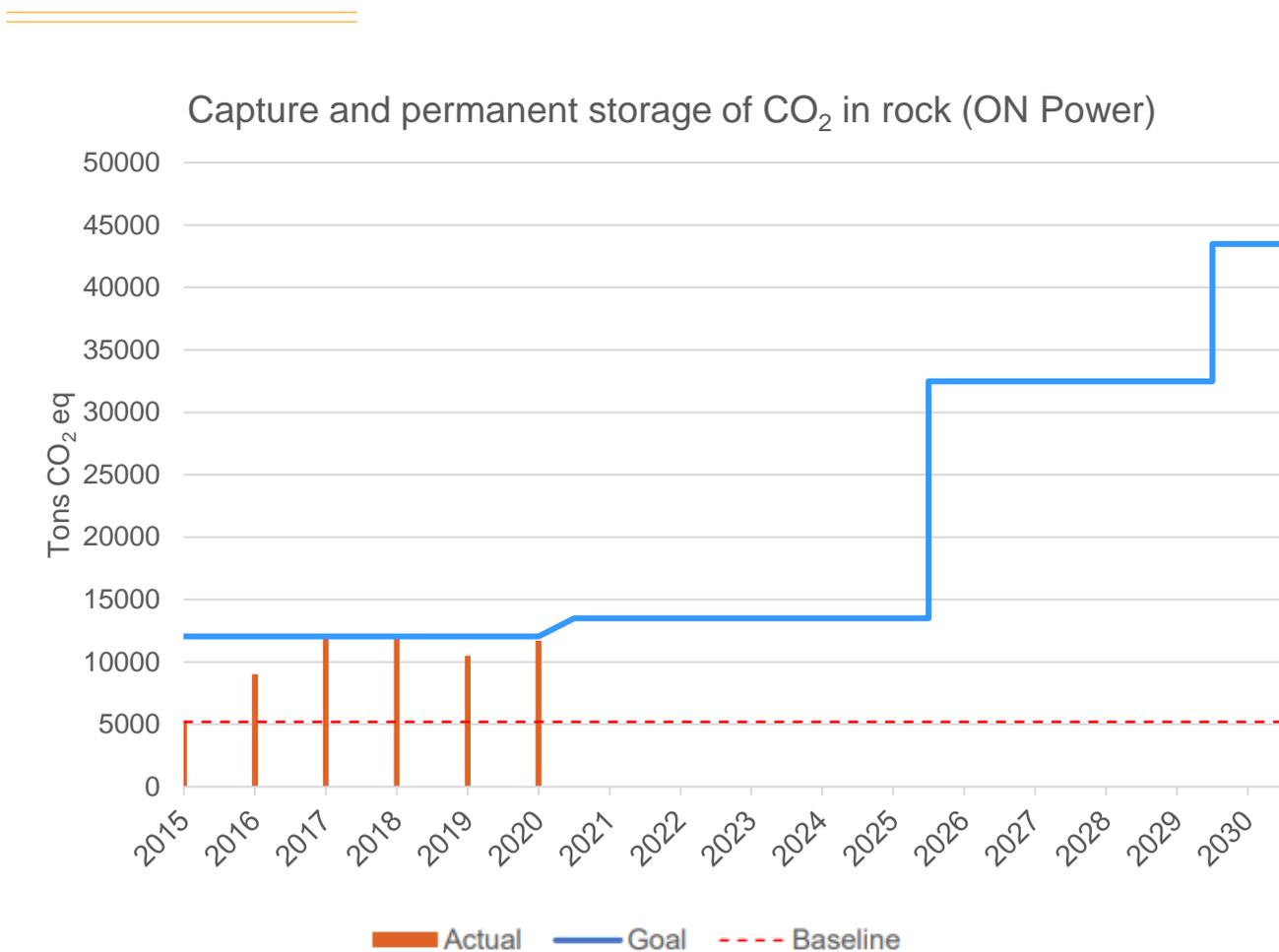
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Ljósmynd á forsíðu: Belinda Eir Engilbertsdóttir

Capture and permanent storage of CO₂ in rock using the Carbfix method at Hellisheidi power plant (ON Power)

The graph below displays the goals 2015 – 2030 as well as the actual estimated amount of CO₂ sequestered into rocks to achieve these goals. In 2020 the permanent storage was close to the goal. Out of the total emissions coming from Hellisheidi, 25% of these emissions were reinjected in 2020, the ratio was 23% in 2019. The aim is to increase re-injection with the Carbfix method at the Hellisheidi Geothermal Power Plant in 2025 and at the Nesjavellir Geothermal Power Plant in 2030 as a part of making the operations carbon neutral.

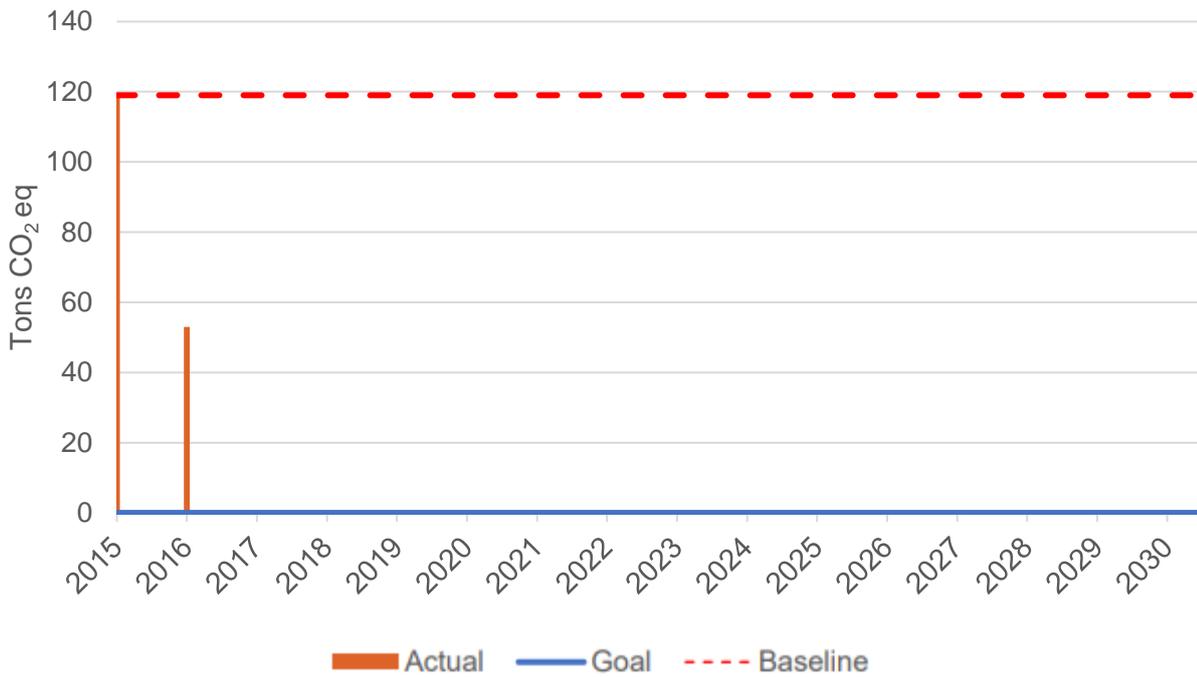


Emissions due to Drilling (ON Power)

The graph below displays the goals and estimated actual emissions coming from ON Power’s drilling operations in Hellisheiði and Nesjavellir between 2015 – 2030 and achievement towards this goal. In 2015, the goal was set so that all high-temperature and reinjection well drilling would be powered by electricity from ON Power. As a result, all electricity emissions from the electricity used during the drilling process then fall under Scope 1.

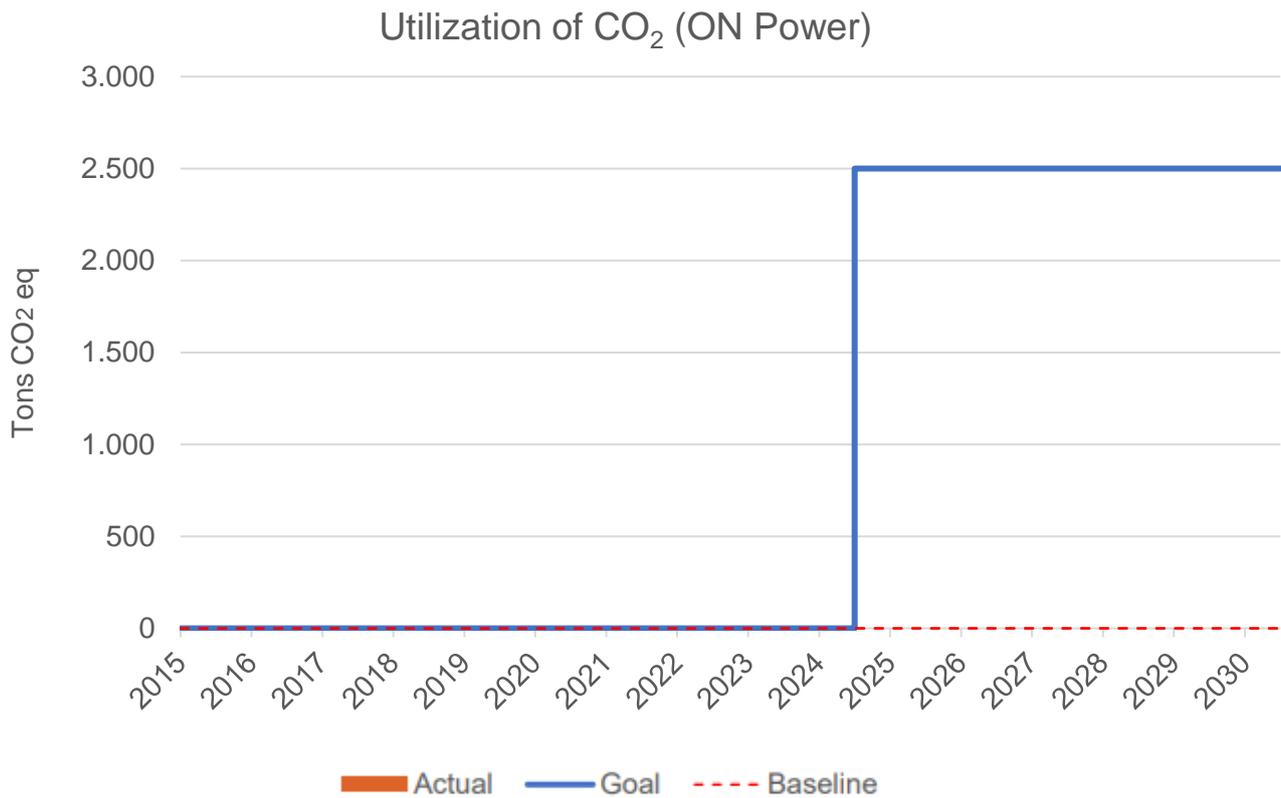
In 2020 like 2019, 2018 and 2017 the goal was met.

Emissions from Energy Use for Drilling (On Power)



Utilization of CO₂ from the Hellisheidi Power Plant in the Geothermal Park (ON Power)

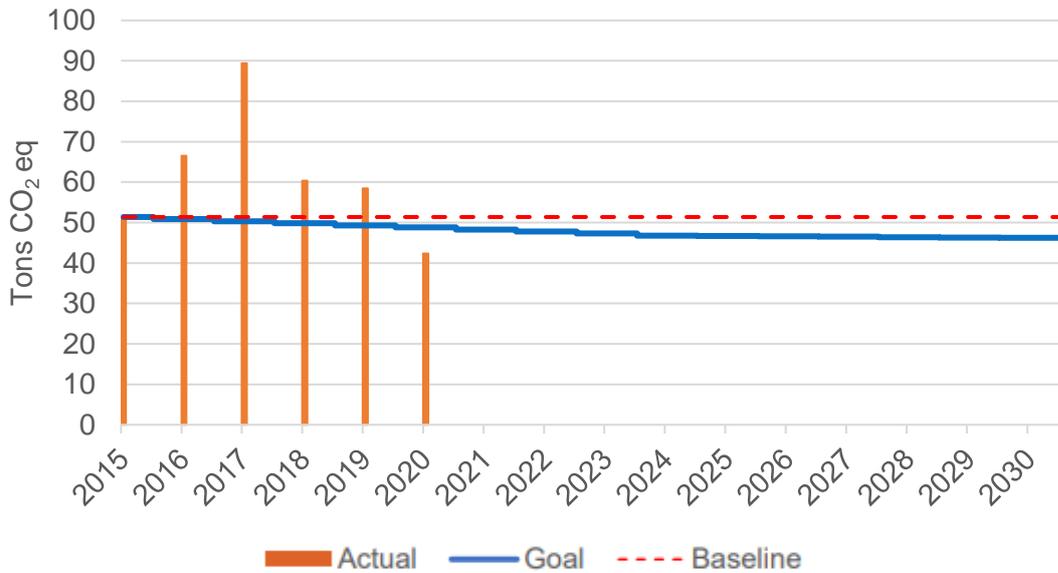
The graph shows the goals of ON Power to utilize CO₂ within the Geothermal Park between 2018 - 2030 and ON Power's progress towards this goal. Utilization of CO₂ was scheduled in however the project is still in preparation and development.



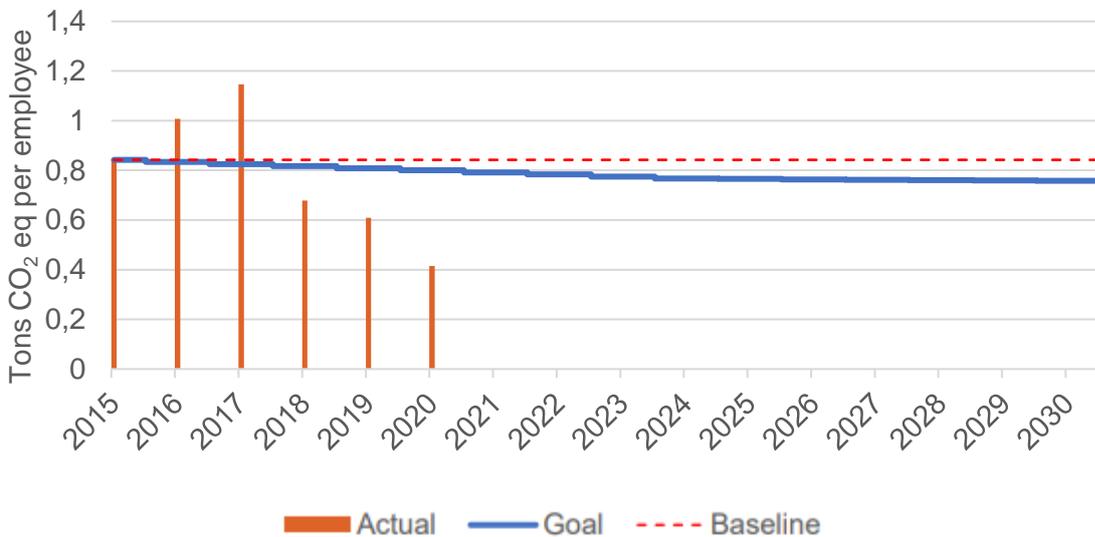
Emissions from Waste (ON Power)

The graphs below display the goals and estimates of actual emissions from waste coming from ON Power’s operations 2015 – 2030 and the achievement towards the goals. The goal was met in 2020. Emissions from waste are calculated according to the category of waste (e.g. general waste, paper, plastic, etc.), the quantity of this category, and an estimate of how this waste is treated (e.g. landfilled vs. recycled). The emission factors for these different treatment options and waste categories are derived from the U.K. Energy Agency*

Emissions from Waste (ON Power)



Emissions from Waste per employee (ON Power)

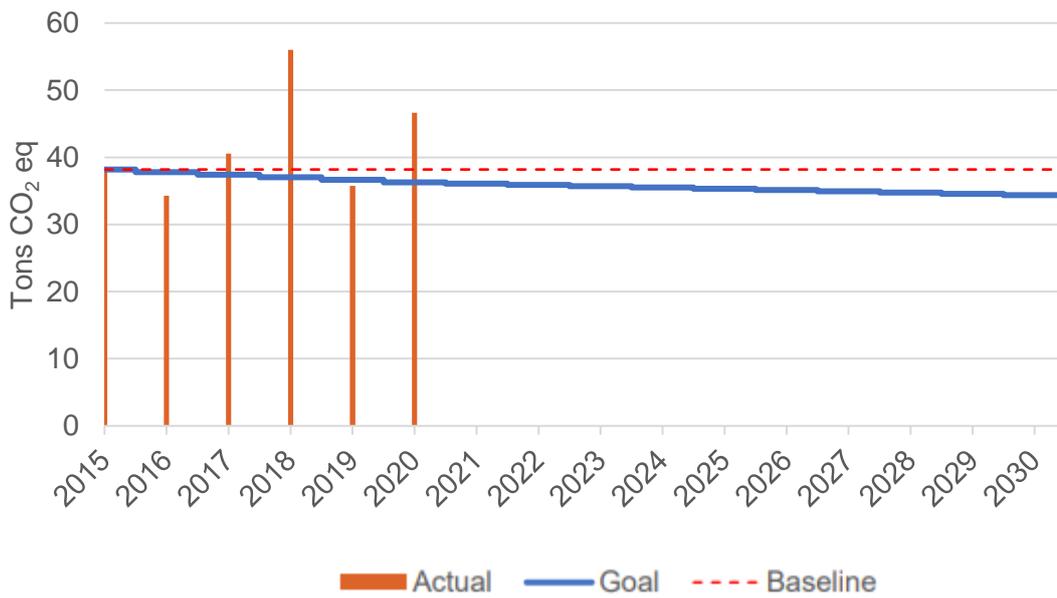


*U.K. Department for Business, Energy & Industrial Strategy. "2017 Government GHG Conversion Factors for Company Reporting". August 2017

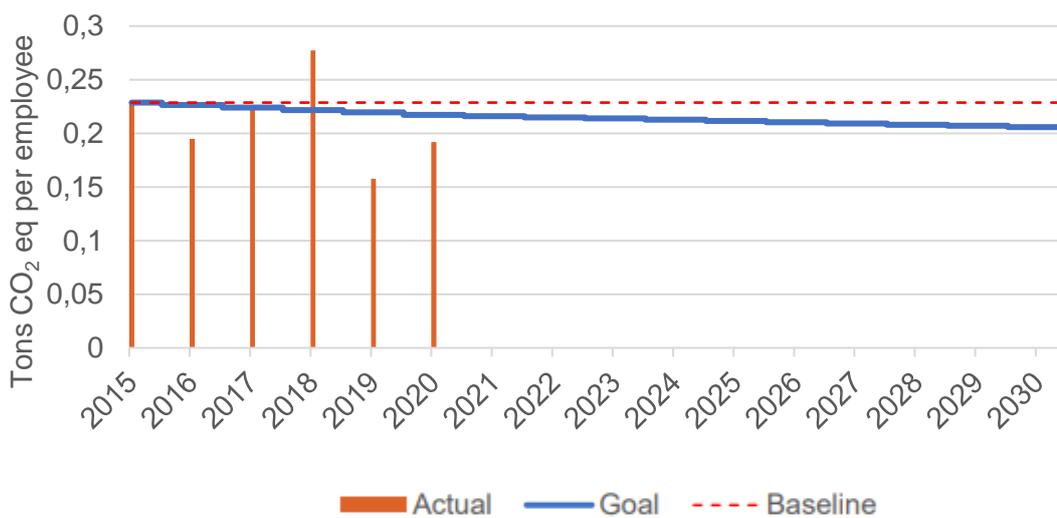
Emissions from Waste (Veitur Utilities)

The graphs below display the goals and estimated actual emissions from waste coming from Veitur Utilities' operations 2015 – 2030 and the level of achievement towards these goals. In 2020, the goals were not met. Emissions from waste are calculated according to the category of waste (e.g. general waste, paper, plastic, etc.), the quantity of this category, and an estimate of how this waste is treated (e.g. landfilled vs. recycled). The emission factors for these different treatment options and waste categories are derived from the U.K. Energy Agency*.

Emissions from Waste (Veitur Utilities)



Emissions from Waste per employee (ON Power)

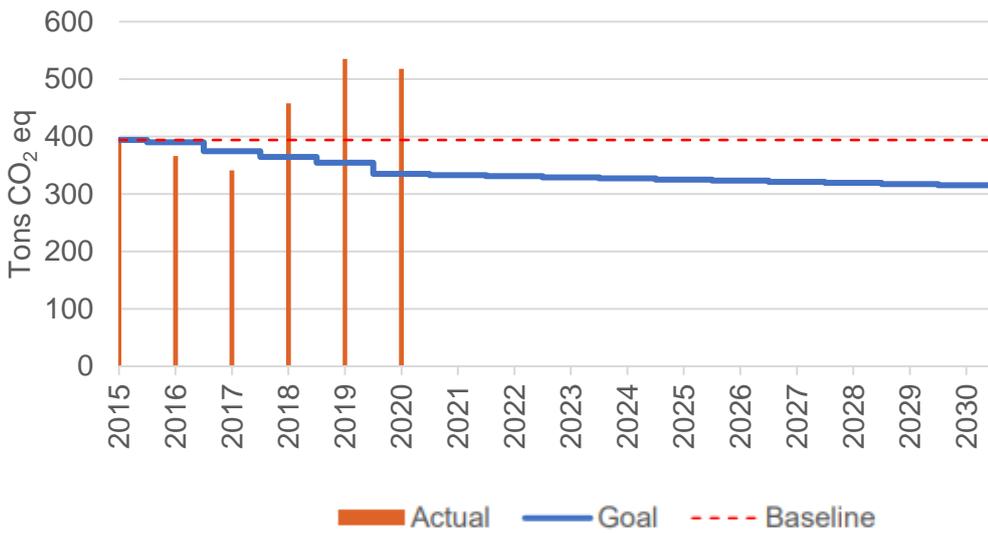


*U.K. Department for Business, Energy & Industrial Strategy. "2017 Government GHG Conversion Factors for Company Reporting". August 2017

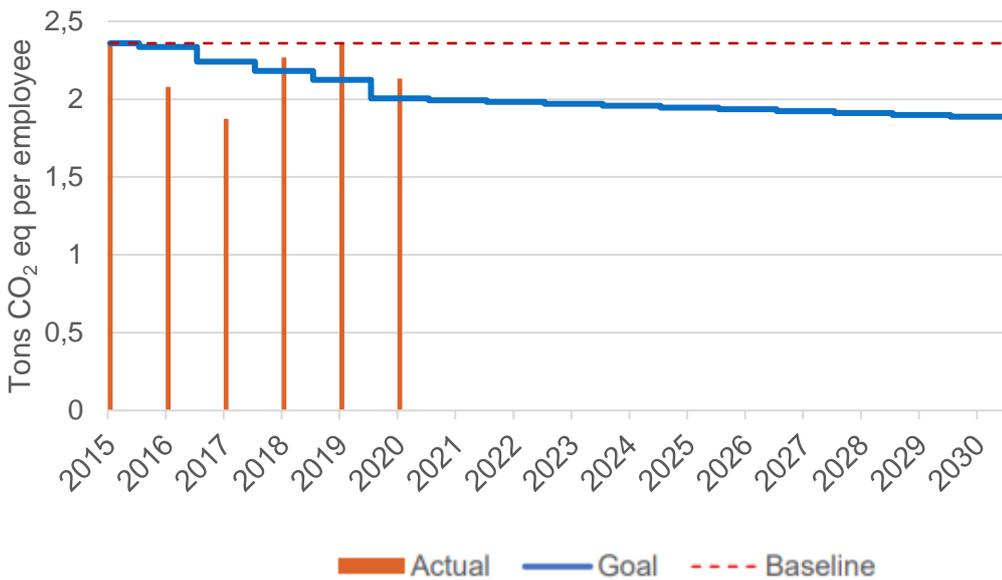
Emissions from Construction and Maintenance (Veitur Utilities)

The graphs below display the goals of Veitur Utilities to measure and reduce greenhouse gas (GHG) emissions due to new construction and maintenance projects from 2015-2030 and the achievement towards these goals. In 2019 the emission goals were not achieved. The measurements are based on estimates on emissions coming from Veitur Utilities' installation of pipelines, maintenance, cutting and new constructions.

Emissions from Construction and Maintenance (Veitur Utilities)



Emissions from Construction and Maintenance per employee (Veitur Utilities)

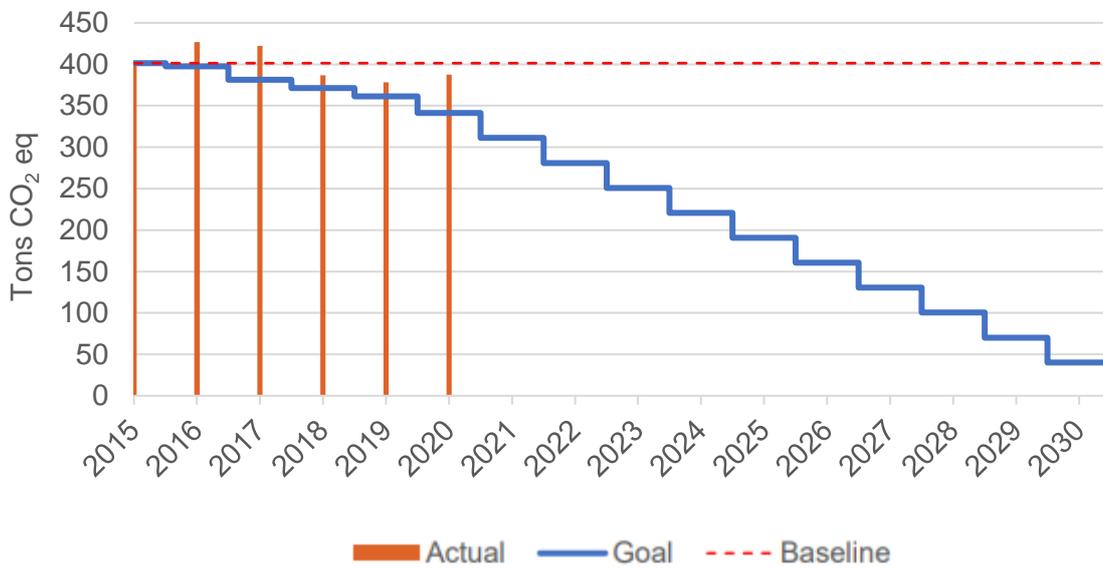


Emissions from Fuel Use due to the use of Vehicles, Equipment and Generators (Veitur Utilities)

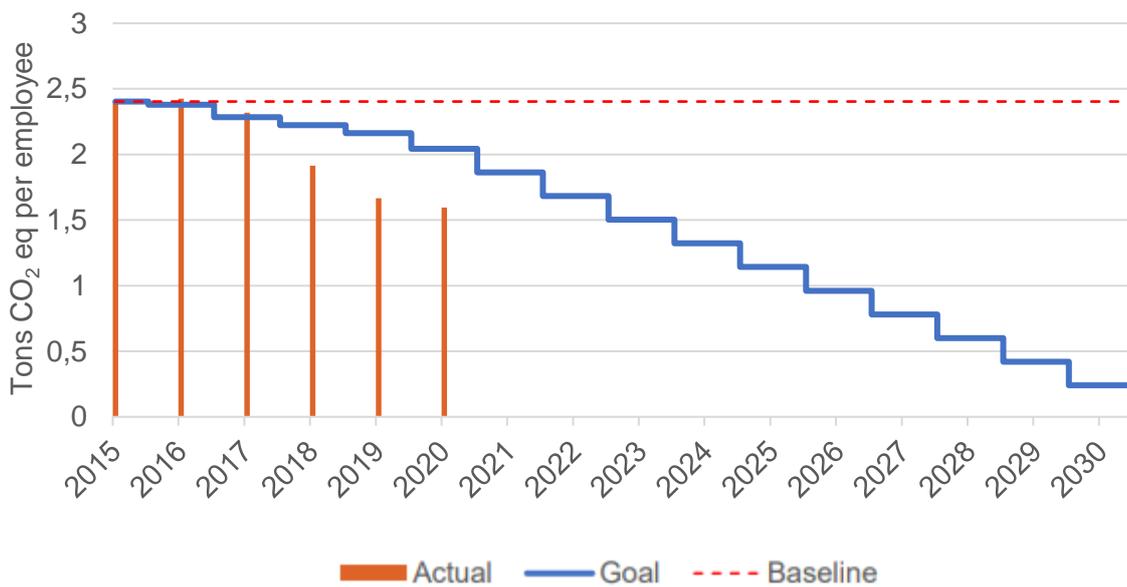
The graphs below display the goals and estimated actual emissions coming from Veitur Utilities' use of vehicles, equipment, and generators from 2015 – 2030 and the achievement towards these goals. In 2020, the goal was not achieved despite the Covid pandemic, but the emissions were below the basic value. The reason is that a large part of the employee works on construction projects and to ensure infection control, they were divided into groups and each group received a car from the companies' car fleet for use and to travel between home and work.

In 2020 on a per-employee-basis the goal was reached. There are few options in terms of cleaner generators and equipment, but Veitur Utilities will continue to work to shift the vehicle fleet to low or zero emission alternative vehicles

Emissions from fuel use (Veitum Utilities)



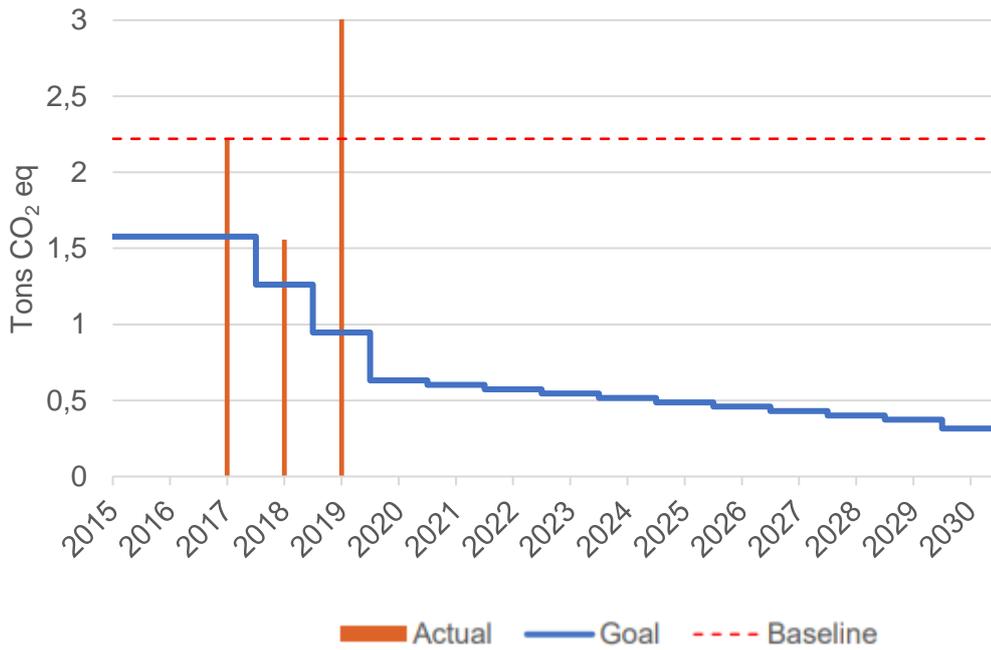
Emissions from fuel use (Veitum Utilities)



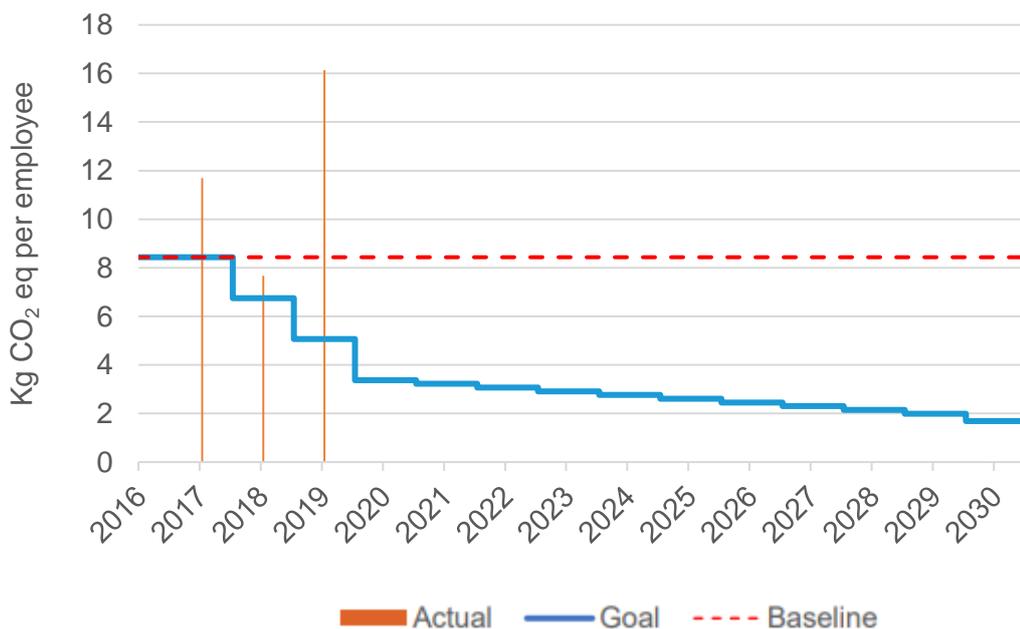
Emissions from Food Waste of the Reykjavik Energy

The following graphs display the goals and estimated actual emissions of Reykjavik Energy's food waste coming from the Group's canteens from 2017 – 2030 and the achievement towards these goals. In 2017, the measurement of food waste began and therefore 2017 is used as the reference year. RE's canteen did not weigh food leftovers after the Covid pandemic began in March 2020, so no results are shown on food waste by 2020. A large part of the staff worked at home and did not eat in RE's canteen.

Emissions from food waste (Reykjavik Energy)



Emissions from food waste per employee (Reykjavik Energy)

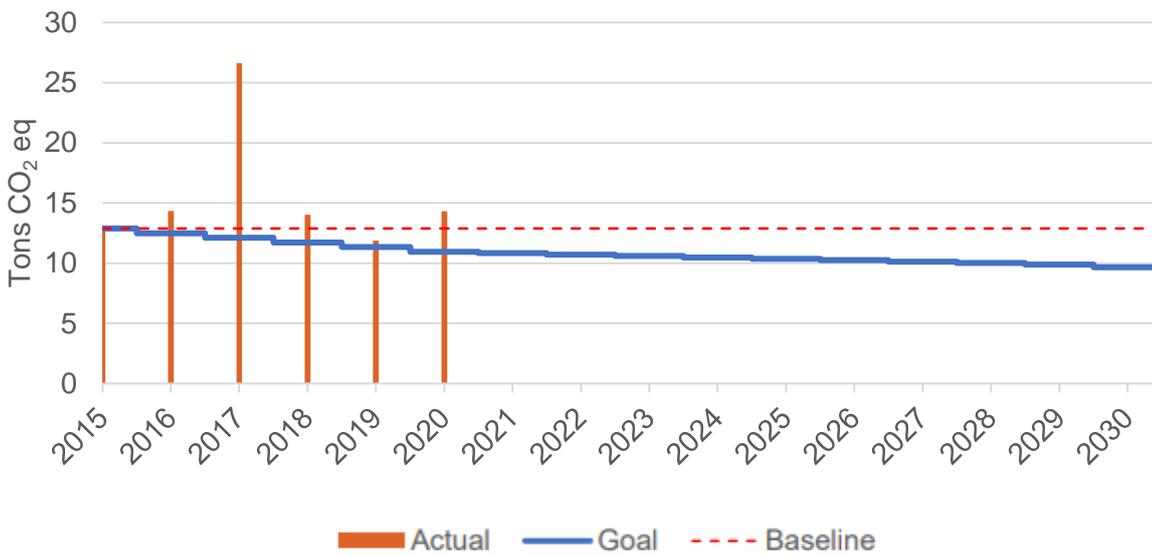


Emissions from Office Waste (Reykjavik Energy)

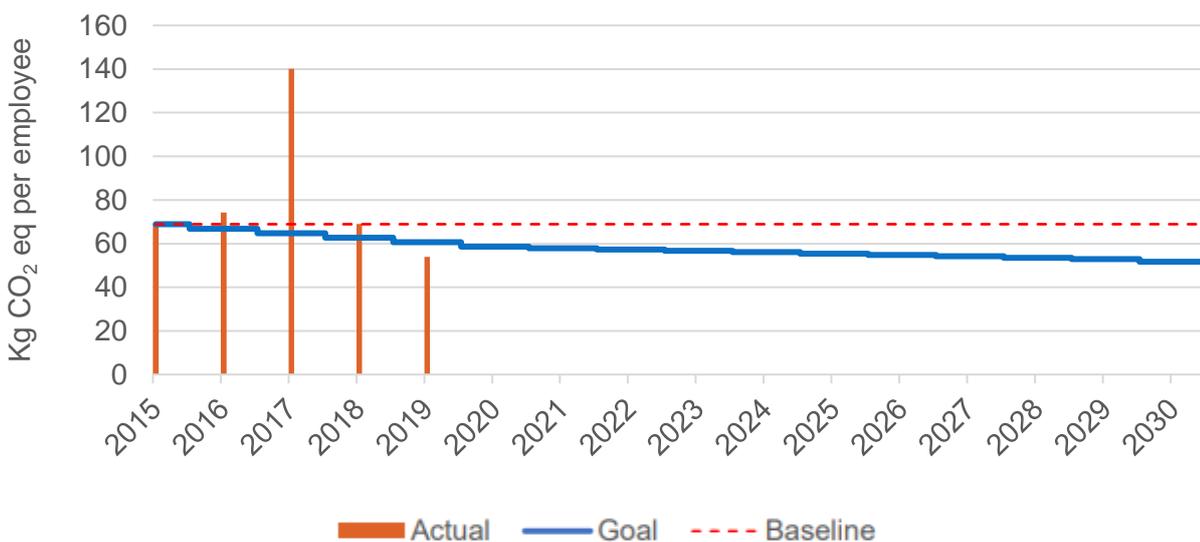
The graphs below display the goals and estimated actual emissions from waste from Reykjavik Energy’s office facilities 2015-2030 and the achievement towards these goals. In 2020 these goals were not achieved in terms of total emissions.

On a per-employee-basis however, the average emissions from waste per employee was below the goals. Emissions from waste are calculated according to the category of waste (e.g. general waste, paper, plastic, etc.), the quantity of this category, and an estimate of how this waste is treated (e.g. landfilled vs. recycled). The emission factors for these different treatment options and waste categories are derived from the U.K. Energy Agency*.

Emissions from office waste (Reykjavik Energy)



Emissions from office waste per employee (Reykjavik Energy)

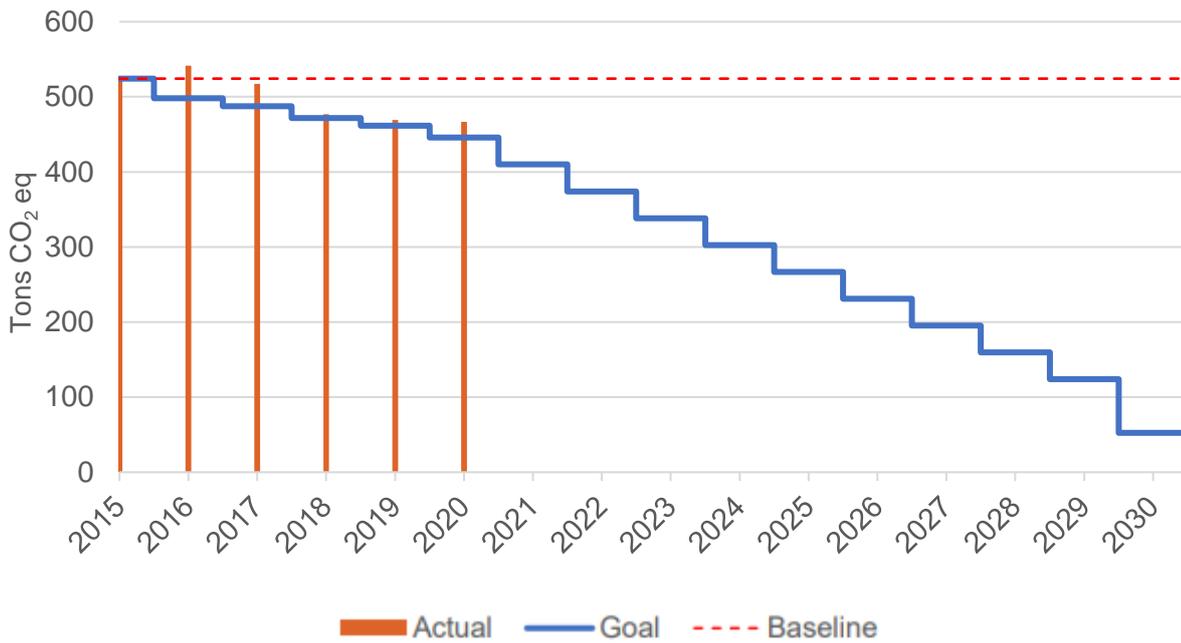


*U.K. Department for Business, Energy & Industrial Strategy. "2017 Government GHG Conversion Factors for Company Reporting". August 2017

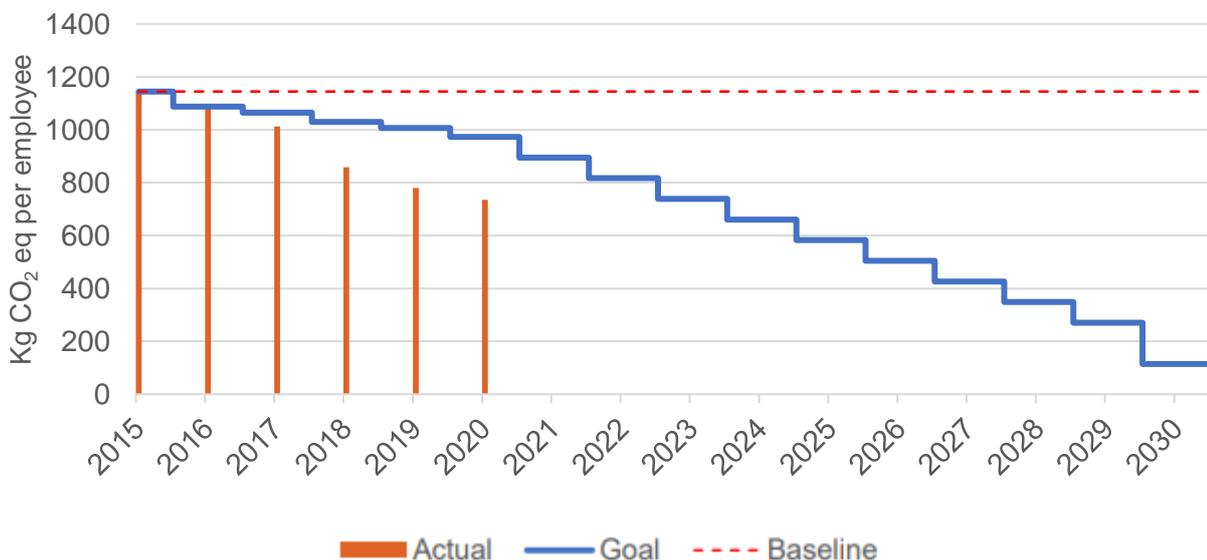
Emissions from Reykjavik Energy's Car Fleet

The graphs below display the goals and estimated actual emissions coming from Reykjavik Energy's car fleet 2015 – 2030 and the achievement towards these goals. In 2020, despite the Covid pandemic, the goals were not met. The reason is that a large part of the employees work on construction projects and to ensure infection control, they were divided into groups and each group received a car from RE's car fleet for use and to travel between home and work. In 2020, it was decided to carbon offset emissions from the car fleet through wetland restoration by the Wetlands Fund and reduce emissions through development projects under the auspices of the United Nations. Please see the Environmental Data Sheet of the Reykjavik Energy 2015-2020.

Emissions from Fuel Use (Reykjavik Energy)



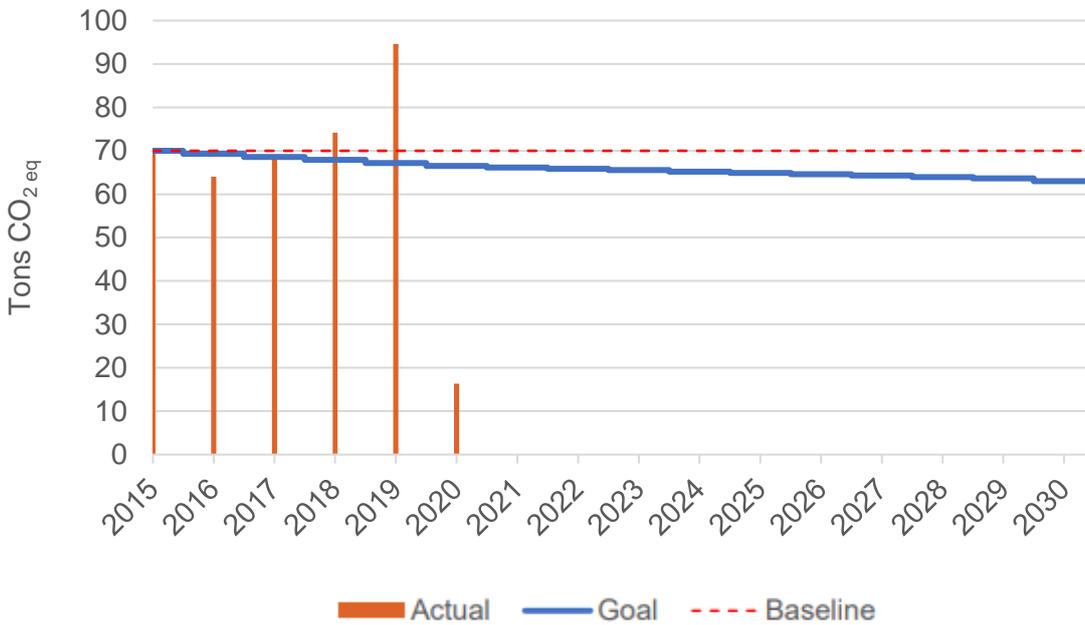
Emissions from Fuel Use per employee (Reykjavik Energy)



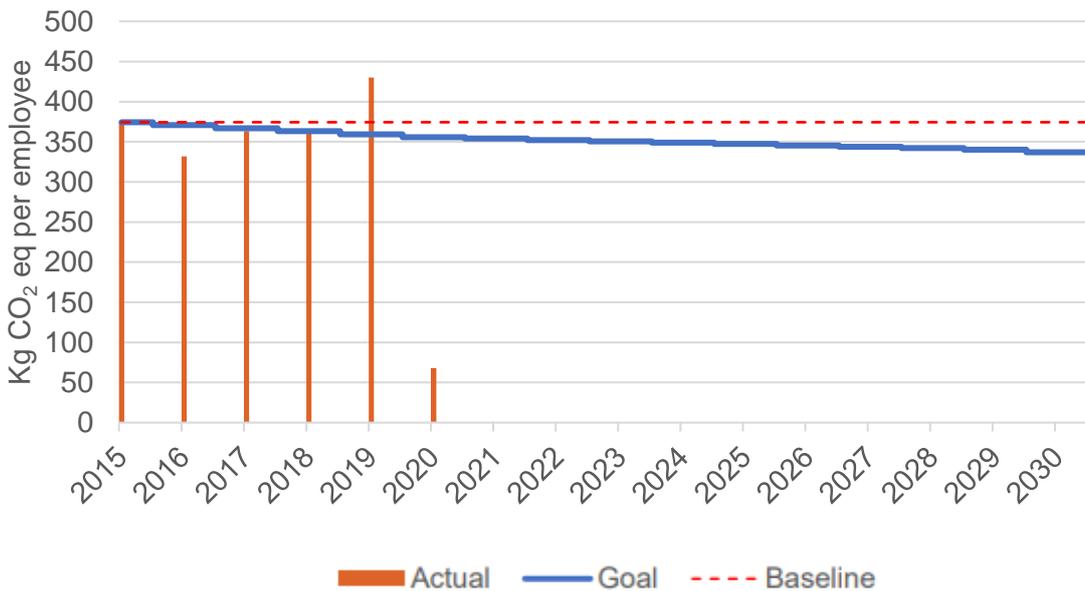
Emissions due to Reykjavik Energy's Employee Business Travel

The graphs below show the goals of Reykjavik Energy in terms of GHG emissions due to business travel by Reykjavik Energy employees from 2015-2030 and current goal progress. In 2020, emissions decreased compared to 2019 because of the Covid pandemic on RE's employee travel bans. This also applies when it comes to emissions by employee. Data on flights are obtained from the RE's accounting system. This is a difficult emission category as the fuel source is outside the scope of the RE and there are not many clean options for replacing traditional flights. However, there are opportunities to reduce emissions by making more frequent use of teleconferencing, reviewing the need for air travel, for example for conferences that can be attended online.

Emissions from RE's business travel (flights)



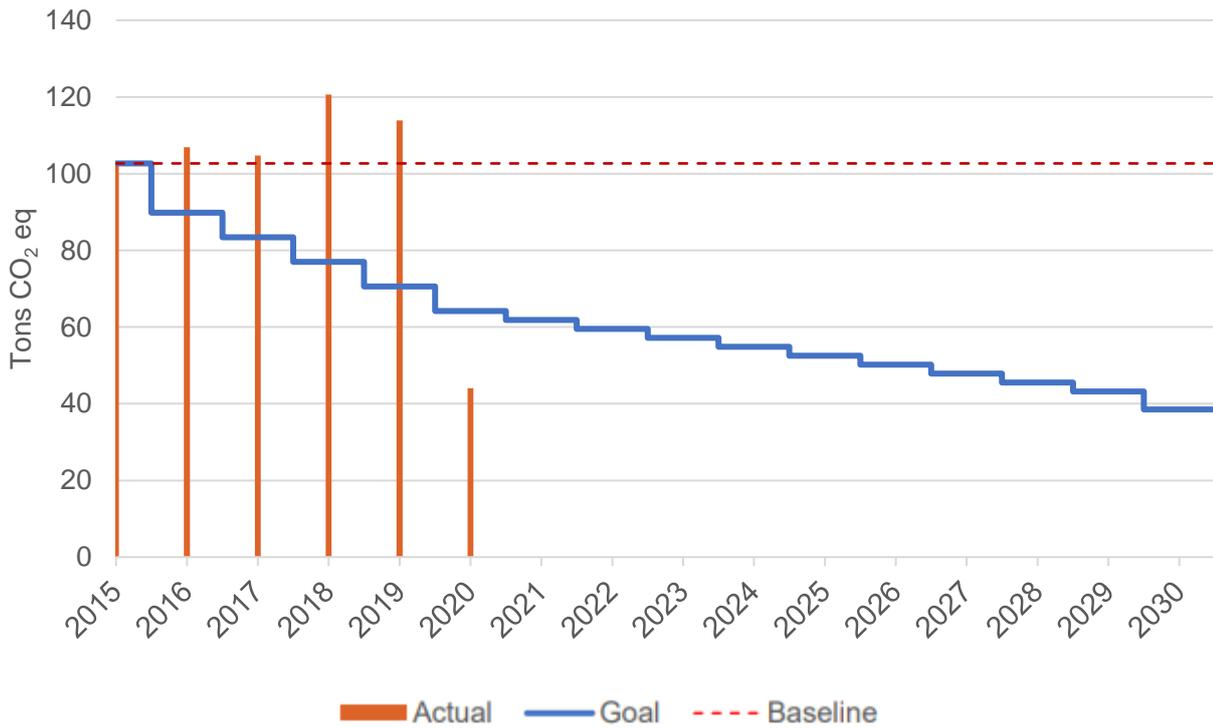
Emissions from RE's business travel per employee (flights)



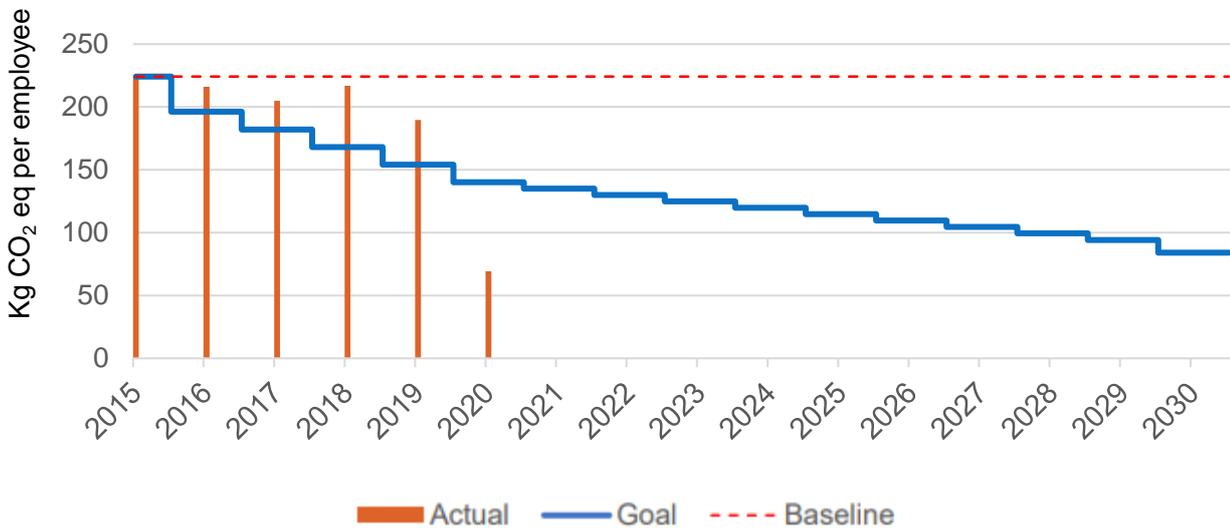
Emissions from Reykjavik Energy 's Employee Commuting

The graphs below display the emissions and goals of the Reykjavik Energy from employee commuting 2015 – 2030 and the achievement towards these goals. In 2020, emissions fell significantly, as a large proportion of RE's employees were working at home after the Covid pandemic started in March. In order to assess the emissions coming from commuting, the residence of employees were estimated according to zip code, in accordance with the GHG Protocol.

Emissions from Reykjavik Energy's Employee Commuting



Emissions from Reykjavik Energy's Employee Commuting per employee



Mitigations through Land Restoration and UN' development projects

The graph below displays the goals and estimated actual binding of CO₂ in nature caused by land restoration and reclamation of wetlands on the premises of the Reykjavik Energy from 2015 – 2030 and the achievement towards these goals. In 2020 the goal was not met but is still above the baseline value.

It was decided to carbon offset emissions from the car fleet, aviation etc. for the year 2020 with wetland restoration under the auspices of the Wetlands Fund and reduce emissions through development projects under the auspices of the United Nations. Please see the Environmental Data of the Reykjavik Energy 2015-2020.

