



Climate and Energy

GRI 302 Energy
GRI 305 Emissions

The construction industry emits considerable amounts of greenhouse gases, resulting in a major climate impact. The climate issue is thereby a prioritized area for NCC, which is now expanding the current target for Scopes 1 and 2 to a reduction in carbon emissions of 60 percent by 2030 compared with base year 2015. We are also adding targets for Scope 3 and setting our sights on reducing indirect emissions by 50 percent by 2030. Accordingly, NCC will contribute to lower climate impact throughout its value chain. The outcome of the sustainability targets in the climate area are followed up in the Senior Management Team, together with activities that will help us achieve the targets.

Towards climate neutrality

To reduce the Group's climate impact, we continued to focus on the fuel mix, energy efficiency, renewable electricity and process improvements, but also on initiatives to reduce the climate impact of the materials and transport used by NCC. These measures also contribute to increased competitiveness and reduced costs for the Group's customers. Through our focus on reducing our climate impact from Scope 3, NCC will influence suppliers and thus the industry to deliver products with a lower climate impact and more efficient transport.

In 2020 and 2021, we will map our Scope 3 and identify processes and measures for achieving the established targets.

NCC has participated in Fossil-free Sweden since 2018. This initiative forms a platform for collaboration and dialogue among more than 300 players intent on making Sweden independent of fossil fuels. In April 2018, the construction and civil engineering industry submitted a joint roadmap, signed by NCC, to the Swedish government showing how the industry can use existing technology to halve its emissions by 2030. Work on implementing the roadmap continued in 2020 and, internally, NCC Building Sweden and Infrastructure launched an action plan that will lead to climate neutrality. NCC is also involved in efforts in Denmark, Finland and Norway designed to move the industry toward climate neutrality. Sveriges Bergmaterialindustrin (The Swedish Aggregates Producers Association) has formulated a roadmap that relates to NCC's aggregate operations.

NCC's asphalt production accounts for just over 60 percent of the Group's own carbon emissions. A large share of the carbon emissions derives from the combustion of fossil fuels at the 63 stationary plants that produce hot mix asphalt. By switching to renewable fuels, such as wood pellets or bio-oil, and reducing the moisture level in stone materials and asphalt granulate, the Group's climate impact has been mitigated in recent years. In Sweden, NCC has converted 28 of a total of 29 asphalt plant for the use of biofuel. NCC is also endeavoring to develop more environmentally compatible products, in part by increasing the portion of recycled asphalt in production. Another example of environmental activities is NCC Green Asphalt, which is hot mix asphalt produced by a manufacturing method that generates significantly lower carbon emissions than conventional production of hot mix asphalt. NCC currently has some 60 facilities that can produce NCC Green Asphalt, corresponding to more than 80 percent of the stationary and mobile facilities. To reduce the Group's other carbon emissions, NCC's business areas are working on a range of initiatives such as energy-efficiency improvements, an increased mix of renewable fuel in machinery and vehicles, energy-efficient portacabins and a continued transition to green-labeled electricity. In Norway, a considerable focus is on fossil-free worksites, meaning ones that only use fossil-free fuels or electric machinery. NCC participates annually in the CDP's Climate Changes assessment, in which additional details about the Group's energy consumption and emissions are reported.

In November 2020, NCC released a Green Bond Investor Report that summarizes its initiatives for the property development projects and asphalt plants that have benefited from the green corporate bonds and the carbon reduction that they account for. The property projects are certified at BREEAM excellent or DGNB Gold and consume at least 20 percent less energy than the legal requirement. In its asphalt plants, NCC has invested in fuel conversion, measures to reduce moisture levels in recycled materials and energy-savings measures. This resulted in a reduction of 25,000 tons in carbon emissions between 2012 and 2019. Also refer to p. 92, Portfolio performance.

District heating/district cooling use within the organization

MWh	2020	Change compared with base year 2015, %	2019	2018	2017	2016	2015
District cooling	75	-64	598	624	22	1,286	209
District heating	29,560	-40	42,508	29,156	29,207	48,933	49,239
District heating/district cooling, total	29,635	-40	43,106	29,780	29,229	50,219	49,448

The need for district heating and district cooling varies from year to year. The amount of district heating and district cooling that is purchased depends to a large extent on the projects that were under way during the year, their placement and the phase at which they found themselves.

Electricity use in the organization

MWh	2020	Change compared with base year 2015, %	2019	2018	2017	2016	2015
Electricity from renewable sources ¹⁾	159,561	56	157,204	152,259	118,754	108,927	102,360
Other electricity	12,037	-91	13,535	18,559	55,259	102,861	131,120
Electricity, total	171,598	-27	170,736	170,817	174,013	211,787	233,480

¹⁾ Hydroelectric and wind power.

A key aspect of work toward achieving the target of halving GHG emissions by 2020 is improved energy efficiency, and replacing fossil-based energy with energy from renewable sources. In 2020, 93 percent of all electricity purchased by NCC was either eco-labeled as "Bra Miljöval" (good environmental choice) or origin-labeled using guarantees of origin. The amount of fossil-based electricity has been reduced by 91 percent since 2015.

Definitions

For calculating emissions, conversion from consumption to emissions has been conducted in accordance with the Greenhouse Gas Protocol. The market-based calculation method is used to measure GHG emissions from electricity and heating. "Location based" is also reported, but this does not form the foundation for measurements concerning our climate goals. NCC does not use climate compensation. Information on purchases of fuels, electricity and heating/cooling energy is collected from NCC's suppliers. Tolero, an in-house developed digital tool, has been used to compile the statistics, and data per user is shown here. This is then summarized for the whole of NCC and forms the foundation for our energy and climate footprint. The emission factors that form the basis for measuring carbon emissions are obtained from suppliers. In those cases where we do not use supplier-specific emission factors, emission factors from DEFRA or the Swedish Environmental Protection Agency are used, depending on applicability.

Measurement of carbon emissions in three scopes

NCC measures its operations' carbon emissions in Scope 1 and 2, as well as parts of Scope 3, with Scope 1 referring to emissions related to the use of fuel in asphalt plants and from own vehicles and machinery, while Scope 2 refers to emissions related to the production of the electricity, district heating and district cooling used by the operations. Scope 3 refers to indirect emissions from purchased material and external services, travel, subcontractors' vehicles and machinery, transportation, demolition of the Group's products and waste. In many industries, the largest emissions are in Scope 3, which is why it is important to also measure and set targets for these. In construction and civil engineering, considerable indirect emissions derive from key input materials and services, such as concrete, steel and transportation. NCC has started to map these emissions and has set a new sustainability target of reducing its Scope 3, within indicated important categories, by 50 percent by 2030. In 2020, NCC's digital collection system for sustainability measurements was expanded to also include Scope 3. By collecting and measuring carbon emissions in a more robust and efficient manner, we gain greater understanding of the climate impact of various choices of materials. The intention is for suppliers to report data directly in the system and to thus more clearly visualize Scope 3.

Risks and opportunities

Climate change is expected to affect both societies and people, and can be linked to both risks and opportunities for NCC. The Group manages this through risk assessments, climate adaptation of operations and targeted efforts to reduce our climate impact. Demand for new business models is also growing, as customers become aware of the opportunities that, for example, digitization and sharing services generate. NCC supports the recommendations that the TCFD (Taskforce on Climate-related Financial Disclosures) has formulated concerning reporting of climate-related information.

Sustainable products and services

As awareness of climate change increases, as well as the changes this entails in cities and societies, the customers' requirements and demand for NCC's offering could change and benefit more sustainable products and services. Through strategic sustainability and product development work, the Group ensures that its offerings match the requirements of customers. Among other things, NCC has developed products that are resilient to forthcoming changes in the climate by, for example, being able to quickly deal with large amounts of water and enabling water to more easily penetrate soil. NCC is also working on site- and project-adapted solutions for outdoor environments, whereby development and construction are combined with retained diversity of natural services, such as temperature regulation, noise abatement, surface water management, aesthetics and opportunities for recreation. Furthermore, NCC continuously reviews its production processes and works to enhance their efficiency, thus diminishing the negative impact on the environment.

Internal processes

NCC depends on a large quantity of raw materials, fuel and other resources to conduct its operations. Changes in supply, price and availability of these products due to climate change, and future taxation of fuel, energy or carbon dioxide could affect NCC's cost base. To minimize the impact, NCC endeavors to achieve a long-term reduction in its climate impact, phase out fossil fuels and move towards a more circular use of raw materials. Climate change, such as extreme weather and flooding, could also lead to changed construction processes and changed conditions for conducting construction and civil engineering operations. The risk of flooding, erosion and earthquakes could have a negative impact the safety of employees, as well as on the storage of materials at construction sites. NCC manages this risk by performing risk assessments of all projects.

Reduction in climate impact

Carbon emissions, related both to purchased fuels and to electricity, district heating and district cooling have declined since the base year 2015. This was due to energy-efficiency improvements, an increased use of renewable fuels and a transition to electricity from renewable sources. Relative to sales, NCC's greenhouse gas emissions from own operations have been reduced by 42 percent since 2015.

The target of achieving a 50-percent reduction by 2020 was extremely ambitious and was significant in driving NCC's transition toward fossil-free operations. Without this distinct and progressive target, our transition toward fossil-free operations would not have been pursued with the same intensity. We are very proud to have reduced our carbon dependence and our climate footprint, but we are not satisfied. We are continuing our transition and are also including Scope 3 in NCC's journey towards climate neutrality.

Environmental product declarations and LCAs

An environmental product declaration (EPD) describes the environmental impact of a product or service and helps customers make more informed product choices. NCC has developed a process for making

its own EPDs for stone and asphalt products from the NCC Industry business area, and most of the EPDs are readily available. The process was certified by Bureau Veritas in November 2019. With knowledge of a product's environmental performance, NCC can conduct systematic work to reduce the product's carbon footprint.

NCC uses life cycle analyses, LCAs, to formulate EPDs. Using LCA calculations, NCC is able to make simulations and then implement changes in production that reduce the environmental impact.

In Finland for the past ten years, NCC has been using an in-house-developed calculation tool to calculate carbon emissions. In 2020, NCC experienced increased demands from customers, whereby LCAs and reduced climate footprint were decisive factors in securing projects. EPDs are an important step in NCC's endeavors to increase transparency and also enable NCC to deliver requested Scope 3 information to its customers, which few suppliers in the industry can do today.

NCC is well equipped ahead of forthcoming Swedish legislation concerning climate calculations in connection with new construction, and in 2021 will already be able to offer climate calculations combined with various solutions for reducing climate footprint.

Total energy consumption in the organization

MWh	2020	2019	2018	2017	2016	2015
Energy consumption, total	1,112,013	1,206,097	1,201,831	1,268,992	1,256,865	1,422,063
Reduction in energy consumption relative base year	-310,050	-215,966	-220,232	-153,071	-165,198	-

¹⁾ Total energy consumption is a sum of energy usage for electricity, district heating and cooling and fuels.

Use of fuel¹⁾ within the organization

MWh	2020	Change compared with base year 2015, %	2019	2018	2017	2016	2015
Renewable fuels	141,137	35	137,273	111,879	114,206	87,893	104,786
Fossil fuels	769,643	-26	854,982	889,356	951,544	906,966	1,034,349
Fuels, total	910,780	-20	992,255	1,001,234	1,065,750	995,859	1 139 135

¹⁾ Fuels include purchased fuels for vehicles, heating, industrial processes and, for example, drying processes at construction sites. NCC continues to reduce its use of fossil fuels. Since 2015, use has been reduced by 26 percent, due largely to the continued conversion to biofuels in the Swedish asphalt plants.

GHG emissions from NCC's operations

MARKET-BASED	2020	Change compared with base year 2015, %	2019	2018	2017	2016	2015
GHG emissions ¹⁾ CO ₂ e (tons, 000)	185	-41	216	227	260	267	312
- of which, Scope 1 ²⁾	179	-30	209	217	234	223	255
- of which, Scope 2 ³⁾	6	-89	7	10	26	44	57
Net sales, SEK M	53,922		58,234	57,346	54,608	52,934	53,116
Emission intensity: CO ₂ e (tons)/SEK M	3.4	-42	3.7	4.0	4.8	5.0	5.9
CO ₂ e (kg)/MWh	0.167	-39	0.218	0.227	0.244	0.268	0.274
Location based ⁴⁾	9,933	-59	121 84	11,360	11,078	8929	24280

¹⁾ The greenhouse gases N₂O, CH₄ and CO₂ are included in the calculations.

²⁾ Refers to direct emissions from NCC's operations, of which 0.7 (tons 000) derived from the combustion of biomass (2020).

³⁾ Refers to indirect emissions from electricity and heat.

⁴⁾ 2015–2019 from NCC's CDP Report, 2020 from Greenhouse gas emission intensity of electricity generation in Europe — European Environment Agency (europa.eu).

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