Report

SpareBank 1 Nord-Norge Green Portfolio Impact Assessment FY2024

CLIENT

SpareBank 1 Nord-Norge

SUBJECT

Impact assessment – energy efficient residential and commercial buildings, electric vehicles and renewable energy

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Report

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SUMMARY

In summary, the assessed impact is significant for all examined asset classes in SpareBank 1 Nord-Norge's portfolio, which qualifies according to the bank's green bond criteria.

The total impact of the assets in the portfolio is estimated to 204,000 tonnes *CO2-eq*/year:

Energy efficient residential buildings	*8,039 tonnes CO2-eq/year*
Energy efficient commercial buildings	*4,462 tonnes CO2-eq/year*
Electric vehicles	*2,620 tonnes CO2-eq/year*
Renewable energy	*188,706 tonnes CO2-eq/year*
Total	***203,827 tonnes CO2-eq/year***

Note that for electric vehicles, the impact above is the sum of 3,640 tonnes CO2-eq/year Scope 1 emissions, and -1,020 tonnes CO2-eq/year in Scope 2 emissions based on the European power mix.

When scaled by the bank's share of financing, the impact is estimated to 37,000 tonnes CO2-eq/year:

Energy efficient residential buildings	*4,019 tonnes CO2-eq/year*
Energy efficient commercial buildings	*2,878 tonnes CO2-eq/year*
Electric vehicles	*1,710 tonnes CO2-eq/year*
Renewable energy	*28,276 tonnes CO2-eq/year*
Total	***36,883 tonnes CO2-eq/year***

Note that for electric vehicles, the impact above is the sum of 2,380 tonnes CO2-eq/year Scope 1 emissions, and -670 tonnes CO2-eq/year in Scope 2 emissions based on the European power mix.

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1 Introduction

On assignment from SpareBank 1 Nord-Norge, Multiconsult has assessed the impact of the bank's loan portfolio eligible for green bonds.

In this document we briefly describe SpareBank 1 Nord-Norge's green bond qualification criteria, the evidence for the criteria and the analysis results of the loan portfolio. More detailed documentation on methodologies and eligibility criteria is made available on SpareBank 1 Nord-Norge's website[1].

1.1 Electricity demand and production

The eligible assets are either producing renewable energy and delivering it into the existing power system or using electricity from the same system. The energy consumption of Norwegian buildings is predominantly electricity, with some district heating and bioenergy. The share of fossil fuel is very low and declining.

Renewables account for approximately 99 percent of the total Norwegian electricity production, the final percentage being thermal power production from natural gas, biomass, and waste heat[2]. Figure 1 1, which is based on numbers from the Association of Issuing Bodies, shows that the Norwegian production mix in 2023 resulted in emissions of 0 gCO2/kWh. In the figure, the production mix is included for other selected European states for comparison.

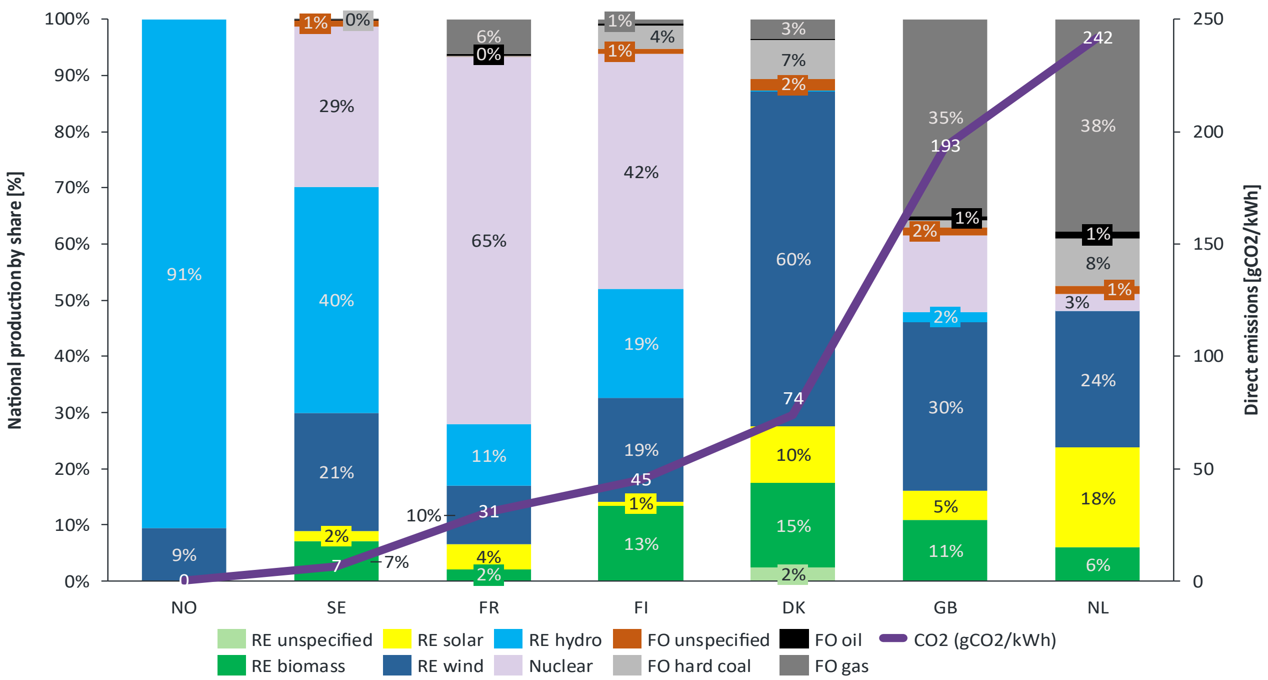

Figure 1-1 National electricity production mix in some selected countries (Source: European Residual Mixes 2023, Association of Issuing Bodies[3])

[1] https://www.sparebank1.no/nb/sorost/om-oss/barekraft/retningslinjer-og-rammeverk/green-bond-framework.html
[2] Statistic Norway Table 08307: Production, imports, exports and consumption of electric energy: https://www.ssb.no/en/statbank/table/08307
[3] https://www.aib-net.org/facts/european-residual-mix, 2024

As Figure 1-1 shows, emissions from power production vary between countries. Due to the interconnection of the power grid, the placement of the system boundary for power production heavily influences the greenhouse gas (GHG) emission factor associated with said production. To demonstrate how the choice of system boundary between Norway only or Europe as a whole and type of emission factor influence the results, the impact assessments are here presented based on several emission factors.

2 Grid factors for impact assessment

This section outlines the emission factors used in the assessment of the green bond-eligible part of SpareBank 1 Nord-Norge's portfolio.

2.1 Emission factors for energy efficient buildings

The CO_2 emissions resulting from in-use energy demand in buildings depend to a large degree on the age of the building. This is due to two factors: the differences in energy efficiency requirements in the building code, and development in the predominant solutions and energy sources for heating in new buildings. Examples of the latter are direct electric heating, several types of heat pumps, bioenergy and district heating. The share of fossil fuel is very low and declining.

Since the Norwegian buildings are predominantly heated by electricity, the placement of the system boundary for power production heavily influences the emission factor. Since the financed eligible objects in the portfolio are rather new, and expected to have a 60-year life, the impact is considered best illustrated by the yearly average CO_2 emissions over their lifetime. The main grid factors used in this green portfolio impact assessment reflect a projected lifetime average, assuming a decarbonisation of the European energy system.

Finans Norge released a guidance document for the calculation of financed GHG emissions in 2023, including recommendations for grid factors to be used[4]. To demonstrate how emissions vary depending on grid factor, and for clarity if comparing avoided emissions from the green portfolio with total portfolio calculations, two additional grid factors are included. These are the Norwegian physically delivered electricity for 2023 from the Norwegian Water Resources and Energy Directorate (NVE)[5] and the Norwegian residual mix for 2023, as calculated by the Association of Issuing Bodies[6]. These factors vary from year to year. The three grid factors are summarised in Table 2-1 and described in more detail in the following sub-sections.

To calculate the impact on climate gas emissions, the grid factors are applied to all electricity consumption in all residential buildings. Electricity is, as mentioned, the dominant energy carrier to Norwegian residential buildings, but the energy mix also includes other energy carriers such as bioenergy and district heating. The influx of other energy sources for heating purposes is applied to all electricity emission factors, resulting in the "Emission factor considering other heating sources", found in the rightmost column in Table 2-1.

[4] Finance Norway, "Gudelines for calculating financed emissions", Finance Norway, Oslo, 2023.
[5] https://www.nve.no/energi/energisystem/kraftproduksjon/hvor-kommer-stroemmen-fra/.
[6] Association of Issuing Bodies, "European Residual Mixes 2023," Association of Issuing Bodies, Brussels, 2024.

Table 2-1 Electricity production emission factors (CO2-eq) without and with the influx of other heating sources for buildings in three scenarios.

Scenario	Description	Emission factor for electricity [gCO2-eq/kWh]	Emission factor considering other heating sources[7] [gCO2-eq/kWh]
European (EU27+ UK+ Norway) NS 3720:2018 electricity mix	Location-based electricity mix with a wide system boundary including EU countries, UK and Norway, average emissions over a building's 60-year lifetime	136	115
Norwegian physically delivered electricity 2023	Location-based production mix with narrow system boundary of Norway only, but including net export/ import only to neighbouring countries, and average annual emission factors	15	15
Norwegian residual mix 2023	Market-based residual mix for Norway with a European marketplace	599	495

2.1.1 European (EU27, UK and Norway) and Norwegian electricity mix over the building's lifetime

Using a life-cycle analysis (LCA), the Norwegian Standard NS 3720:20188 considers international trade of electricity and the fact that consumption and grid factor do not necessarily mirror domestic production. The grid factor, as an average in the lifetime of an asset, is based on a linear declining trajectory from the current grid factor to a close-to-zero emission factor in 2050 and steady onwards. This factor is location-based. The mentioned standard calculates, on a life-cycle basis, the average emission factor for the next 60 years, according to a European (EU27, UK and Norway) system boundary, as described in Table 2-1.

The standard also calculates the equivalent Norway-specific emission factor. Norway is part of a larger, integrated European power grid, and the import/export of electricity throughout the year means that not all electricity consumed in Norway is produced here. Using the European mix instead of the Norway-specific mix is then a more conservative approach.

The European factor is 136 gCO2-eq/kWh. This constitutes the GHG emission intensity baseline for energy use in buildings with a life span of 50-60 years, assuming that the emission factor of the European power production mix is close to zero in 2050.

2.1.2 Norwegian physically delivered electricity 2023

NVE calculates a climate declaration for physically delivered electricity for the previous year. The factor represents electricity consumed in Norway, accounting for emissions from net import and export of electricity from neighbouring countries and these countries' average annual emission factors. For 2023, this grid factor is 15 gCO2-eq/kWh[9]. This is also a location-based grid factor.

[7] Calculated by Multiconsult, based on building code assignments for the Norwegian Building Authority (DiBK).
[8] SN/K 356 Klimagassberegninger for bygg, "NS 3720:2018 Metode for klimagassberegninger for bygninger," Standard Norge, Oslo, 2018.
[9] https://www.nve.no/energi/energisystem/kraftproduksjon/hvor-kommer-stroemmen-fra/.

2.1.3 Norwegian residual mix 2023

Certificates of origin, direct power purchase agreements or other documentation of which power has been purchased for the buildings in the portfolio, are not available to the bank. There is also no basis for making assumptions on the share of the energy consumed by the buildings in the portfolio that has been purchased with Guarantees of Origin. An alternative market-based grid factor for Norway is then the electricity disclosure published by NVE[10] and Association of Issuing Bodies[11]. This is the electricity residual mix of the country, which shows the sources of the electricity supply that is not covered with Guarantees of Origin, considering a European marketplace for electricity. Guarantees of Origin are not very widespread in the Norwegian electricity end-user market, resulting in a high emission factor of 599 gCO2-eq/kWh for 2023[11].

2.2 Emission factors for zero-emission vehicles

The GHG emission intensity baseline for power consumption may be calculated with different system boundaries. For electric vehicles, a three-year average emission factor for power in Europe is applied, that is, yearly power production and related CO_2 emissions as presented by the Association of Issuing Bodies[12].

Similar to the European NS 3720:2018 electricity mixes for buildings, the average emission factor relevant for electric vehicles is also calculated based on a trajectory from the current grid factor to a close-to-zero emission factor in 2050. But while a life cycle-based factor is used for buildings, a factor based on European (EU27, UK and Norway) electricity production mixes for recent years is applied to represent the location-based production mix with wide system boundaries.

Considering the emission trajectory and lifetime of the vehicles, this gives the electricity factors 150 gCO2-eq/kWh for passenger vehicles, 159 gCO2-eq/kWh for light-duty vehicles and 167 gCO2-eq/kWh for heavy-duty vehicles. In addition, the Norwegian NVE physically delivered electricity and residual mixes for 2023, presented in the previous sub-section, are applied. Relevant indirect emission factors per distance [gCO2/km] are calculated based on these and used in the EV analysis. See more details in subsection 5.3.

2.3 Emission factors for renewable energy production

For renewable energy, the impact calculations use the electricity emission factors from Table 2-1 as baselines. The difference between the renewable energy and the grid electricity emissions is considered the avoided emissions per produced unit of electricity. The location-based mix for Europe have been used in previous analyses, and the location-based and market-based mixes for Norway are introduced for comparison. The calculations are described more fully in subsection 6.3.1.

[10] https://www.nve.no/energy-supply/electricity-disclosure/?ref=mainmenu, 2024
[11] https://www.aib-net.org/facts/european-residual-mix/2023, 2024
[12] https://www.aib-net.org/facts/european-residual-mix, 2023

3 Energy efficient residential buildings

3.1 Eligibility criteria

Eligibility in this impact assessment for residential buildings in the SpareBank 1 Nord-Norge portfolio is identified against a building code criterion and an EPC criterion as formulated below. These criteria are in accordance with the EU Taxonomy Climate Delegated Act.

The dataset provided by SpareBank 1 Nord-Norge contains the following data for each object:

- Building category,
- area,
- year of construction,
- EPC energy label,
- Data on energy demand.

3.1.1 Buildings built in 2021 or later: NZEB-10%

The EU Taxonomy for sustainable activities distinguishes between new and existing buildings, with criteria dependent on whether the buildings are completed before or after 31 December 2020. The technical screening criteria for new buildings require the buildings to have an energy performance, described in terms of primary energy demand, at least 10 percent lower than the threshold set in the national definition of a nearly zero-energy building (NZEB). The energy performance is to be documented by an Energy Performance Certificate (EPC).

Multiconsult has assessed the performance of new buildings and how the most energy efficient buildings may be identified in the bank's loan portfolio based on the Norwegian NZEB definition. The Norwegian national definition of NZEB was published in January 2023[13] with a correction issued in January 2024[14].

All residential buildings completed after 31 December 2020 with an EPC label A qualify according to the NZEB-10 percent criterion. Residential buildings with EPC label B may also qualify, depending on energy demand.

3.1.2 Buildings built before 2021: EPC A label or within the top 15% low-carbon buildings in Norway

The SpareBank 1 Norge-Norge criteria for existing residential buildings identify buildings with EPC A or within the top 15 percent most energy efficient buildings in Norway as eligible. The bank has identified the eligible buildings in their portfolio, following NVE's suggested limit values per 2023 and using registered energy performance certificates or estimated energy usage from Eiendomsverdi.

3.2 Impact assessment – Residential buildings

Over the past several decades, changes in the building code have promoted more energy-efficient buildings. By combining data on calculated energy demand based on building code requirements with information on the residential building stock, the average specific energy demand is estimated at

[13] https://www.regjeringen.no/no/aktuelt/taksonomien-maler-for-rapportering-og-retting-av-veiledning-om-primarenergifaktorer/id3021759
[14] https://www.regjeringen.no/no/aktuelt/rettleiing-om-utrekning-av-primarenergibehov-i-bygningar-og-energirammer-for-nesten-nullenergibygningar/id2961158

257 kWh/m^2 for small residential buildings and 200 kWh/m^2 for apartments. These figures are used as the baseline in the impact calculations.

For the buildings qualifying according to the NZEB-10%, the reduction is calculated based on the difference between the calculated specific energy usage of each unit and the baseline.

For the buildings qualifying according to the top 15 percent EPC-criterion, the reduction is calculated based on the difference between the energy demand for the achieved energy label and the baseline.

For the TEK17 buildings grandfathered under the NZEB-10% criterion, the reduction is calculated based on the difference between the energy demand for the building code and the baseline.

The eligible residential buildings in SpareBank 1 Nord-Norge's portfolio are estimated to amount to 0.5 million square meters. The available data includes reliable areas for most objects. For objects where this data is not available, the area per dwelling is calculated based on the average area derived from national statistics[15].

The majority of the 3,439 eligible objects are eligible through the top 15 percent criterion. 82 percent are eligible under the top 15 percent criterion and 18 percent are eligible under the NZEB-10 percent criterion.

Table 3-1 Eligible residential objects in the SpareBank 1 Nord-Norge portfolio

	No. of units of eligible buildings in the portfolio					
	NZEB-10% EPC A	NZEB-10% EPC B	NZEB-10% grand-fathered	Top 15 % EPC A	Top 15 % EPC B	Top 15 % EPC C
Small residential buildings	94	20	209	86	460	149
Apartments	58	69	185	74	1,576	459
Sum	**152**	**89**	**394**	**160**	**2,036**	**608**

Table 3-2 Calculated area of qualifying buildings

	Area of eligible buildings in the portfolio					
	NZEB-10% EPC A	NZEB-10% EPC B	NZEB-10% grand-fathered	Top 15 % EPC A	Top 15 % EPC B	Top 15 % EPC C
Small residential buildings	6,235	1,252	14,965	6,208	35,150	13,604
Apartments	11,079	14,032	30,348	14,719	291,716	87,718
Sum	**17,315**	**15,285**	**45,312**	**20,927**	**326,865**	**101,322**

Based on the calculated figures in Table 3-1 and Table 3-2, the energy efficiency of this part of the portfolio is estimated as described earlier. All these residential buildings are not necessarily included in one single bond issuance.

[15] Statistic Norway Table 06513: Dwellings, by type of building and utility floor space

To calculate the impact on climate gas emissions, the trajectory is applied to all electricity consumption in all buildings. Electricity is the dominant energy carrier to Norwegian buildings, but the energy mix also includes bioenergy and district heating. Emission factors considering other heating sources in the Table 2-1 are used in the calculations.

Table 3-3 below indicates how much more energy efficient the eligible part of the portfolio is compared to the average residential Norwegian building stock. It also presents how much the calculated reduction in energy demand constitutes in CO_2 emissions.

Table 3-3 Performance of eligible residential objects compared to the average building stock

	Avoided energy demand compared to baseline [GWh/year]	Avoided CO_2 emissions compared to baseline [tonnes CO2-eq/year]		
		European (EU27+ UK+ Norway) NS 3720:2018 electricity mix	Norwegian physically delivered electricity 2023	Norwegian residual mix 2023
Eligible buildings in portfolio	70	8,039	1,084	34,633
Eligible buildings in portfolio - scaled by bank's engagement	35	4,019	542	17,312

4 Energy efficient commercial buildings

4.1 Eligibility criteria

Eligibility in this impact assessment for commercial buildings in the SpareBank 1 Nord-Norge portfolio is identified against a building code criterion and an EPC criterion as formulated below. These criteria are in accordance with the EU Taxonomy Climate Delegated Act.

The dataset provided by SpareBank 1 Nord-Norge contains the following data for each object: Building category, area, year of construction, EPC energy label and the bank's share of financing (loan-to-value).

4.1.1 Buildings built in 2021 or later: NZEB-10%

The EU Taxonomy for sustainable activities distinguishes between new and existing buildings, with criteria dependent on whether the buildings are completed before or after 31 December 2020. The technical screening criteria for new buildings requires the buildings to have an energy performance, described in terms of primary energy demand, at least 10 percent lower than the threshold set in the national definition of a nearly zero-energy building (NZEB). The energy performance is to be documented by an Energy Performance Certificate (EPC).

Multiconsult has assessed the performance of new buildings and how the most energy efficient buildings may be identified in the bank's loan portfolio based the Norwegian NZEB definition. The Norwegian national definition of NZEB was published in January 2023 with a correction issued in January 2024.

All commercial buildings completed after 31 December 2020 with EPC label A qualify according to the NZEB-10 percent criterion. Commercial buildings with EPC label B may also qualify depending on energy demand.

4.1.2 Buildings built before 2021: EPC A label or within the top 15% low carbon buildings in Norway

The SpareBank 1 Norge-Norge criteria for existing commercial buildings identify buildings with EPC A or within the top 15 percent most energy efficient buildings in Norway as eligible. The bank has identified the eligible buildings in their portfolio, following NVE's suggested limit values per 2023 and using registered energy performance certificates or estimated energy usage from Eiendomsverdi.

4.2 Impact assessment – Commercial buildings

Combining the information on the calculated specific energy demand related to building code and information on the commercial building stock, the calculated average specific energy demand on the part of the Norwegian building stock examined. These figures are used as the baseline in the impact calculations.

For the buildings qualifying according to the NZEB-10%, the reduction is calculated based on the difference between the calculated specific energy usage of each unit and the baseline.

For the buildings qualifying according to the top 15 percent EPC-criterion, the reduction is calculated based on the difference between the energy demand for the achieved energy label and the baseline.

The eligible buildings in SpareBank 1 Nord-Norge's commercial portfolio are estimated to amount to 257,000 m^2. One object is found eligible according to NZEB-10 percent. 48 buildings are eligible under top 15 percent for buildings from 2020 and older, of which four buildings have EPC A and 44 have EPC B.

Table 4-1 Calculated building areas for eligible commercial objects

	Area qualifying buildings in portfolio [m^2]	
	NZEB-10%	Top 15 percent
Retail/commercial buildings	1,392	175,513
Hotel and restaurant buildings	-	25,044
Industry and small warehouse buildings	-	26,019
Office buildings	-	28,633
Sum	**1,392**	**255,209**

Based on the calculated figures in Table 4-1, the energy efficiency of this part of the portfolio is estimated. Not all the commercial buildings in the portfolio are included in a single bond issuance.

The table below indicates how much more energy efficient the eligible part of the portfolio is compared to the average Norwegian commercial building stock. It also presents how much the calculated reduction in energy demand constitutes in CO_2 emissions.

Table 4-2 Performance of commercial eligible objects compared to the average building stock

	Avoided energy demand compared to baseline [GWh/year]	Avoided CO_2 emissions compared to the baseline [tonnes CO2-eq/year]		
		European (EU27+ UK+ Norway) NS 3720:2018 electricity mix	Norwegian physically delivered electricity 2023	Norwegian residual mix 2023
Eligible buildings in the portfolio	39	4,462	602	19,221
Eligible buildings in the portfolio - scaled by bank's engagement	25	2,878	388	12,398

5 Electric vehicles

Multiconsult has assessed the direct and indirect impact of electric vehicles. The bank has provided the necessary data on the number of electric vehicles in their portfolio and portfolio volume, including the type of engine, fuel, and vehicle category, for their vehicles registered in Norway. SpareBank 1 Nord-Norge's vehicle portfolio contained 4,174 electric vehicles as of the end of 2024. For more information related to the eligibility criteria, we refer to the bank's website[16].

The identified eligible vehicles in the portfolio also align with the technical eligibility criteria formulated in the Climate Bonds Standard[17] and in the EU Taxonomy[18].

The bank's portfolio is assessed regarding direct emissions (Scope 1) and indirect emissions related to electric power production (Scope 2). A baseline is established as the emission of the average new vehicles introduced to the market, EVs excluded.

5.1 Eligibility

The green loan portfolio of SpareBank 1 Nord-Norge contains electric vehicles that meet the eligibility criteria as formulated below:

- Fully electric, hydrogen or otherwise zero-emission vehicles for the transportation of passengers or freight

The portfolio in question includes only fully electric vehicles financed by the bank, and the analysis is limited to passenger vehicles, light-duty vehicles (vans) and heavy-duty vehicles (trucks).

5.2 EV policies and regulations

This chapter summarises trends in personal mobility, EV and biofuel policy in Norway relevant for the subsequent Scope 1 and Scope 2 assessments.

5.2.1 Personal mobility and the car fleet in Norway and Sweden

Personal mobility in Norway is high, among the highest in Europe, with privately owned passenger vehicles making up the largest share of the passenger transportation work. Historical data indicate that the average distance driven annually by passenger vehicles in Norway has been declining since 2007[11]. During this peak year, passenger vehicles in Norway were driven an average of 14,000 km annually.

In 2023, the average Norwegian passenger vehicle travelled about 11,300 km. For light-duty vehicles, the average travelled distance was 13,300 km. Heavy-duty vehicles in Norway travelled about 35,900 km.[19] The expected yearly travelled distance for the vehicles in the portfolio is in this analysis estimated based on an expectation of a continuing trend of reduced yearly travelled distance, and as an average over the vehicles' lifetime.

The average age of passenger vehicles scrapped for refund in Norway in 2023 was 18 years, and for vans, 16 years.[20] The history of modern EVs is short, and there is yet no evidence for the lifetime of EVs being different from that of other vehicles. Due to uncertainties related to the expected lifetime of new

[16] https://www.sparebank1.no/en/nord-norge/about-us/sustainability/green-finance-framework.html
[17] https://www.climatebonds.net/standard/transport
[18] https://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf
[19] Statistics Norway 12578: Kjørelengder, etter kjøretøytype, drivstofftype, alder, statistikkvariabel og år, 2024
[20] Statistics Norway 05522: Vehicles scrapped for refund, by contents and year, 2024

vehicles sold between 2013 and 2024, the average lifetime for passenger vehicles and light-duty vehicles in this analysis is set to 18 years and 16 years, respectively. The average lifetime for heavy-duty vehicles is estimated to be 14 years, independent of fuel type.[21]

5.2.2 Electric vehicle policy in Norway

The Norwegian government has, over time, with different administrations, had high ambitions both regarding electric vehicles and biofuel to reduce CO_2 emissions. There were 789,000 electric passenger vehicles on Norwegian roads by the end of 2024, which accounts for 27 percent of the total passenger vehicle stock[22]. The Norwegian Government's targets are that all new light-duty and passenger vehicles sold should be zero-emission from 2025, and that new heavy-duty vehicle sales should be zero-emission or biogas by 2030[23].

The Norwegian EV policy, one of the world's most ambitious EV policies, was effectively put into motion by a series of green incentives, including tax exemption on VAT and registration tax, free fares on the many toll roads and ferries, and free parking and charging in cities.

In 2023, the Norwegian government adjusted the previous VAT exemption to only be applicable up to NOK 500,000 of the purchase price. Additionally, EV vehicles now need to pay a registration fee to the same degree as fossil fuel vehicles. Many of the other benefits have been reduced, but EVs are still currently paying up to a maximum, by law, of 70 percent of the standard tariffs for toll roads, and 50 percent of standard tariffs for parking and ferries.

5.2.3 Biofuel policy in Norway

Norway has an ambitious biofuel policy. From 2018, legislation required all petrol retailers to sell fuel containing biofuels to road traffic. The policy has since evolved. The current government platform emphasises avoiding the use of biofuels that pose a high risk of increasing deforestation and reinforces the requirements to utilise second-generation biofuels in the fuels sold.

In 2024, the overall quota obligation of biofuels to road traffic was 19 percent, whereof the advanced biofuel requirement was set at 12.5 percent. To incentivise the use of advanced biofuels, one litre of advanced biofuels is counted as two litres of conventional biofuel, for every litre that exceeds the 12.5 percent advanced biofuel requirement[24].Subsequently, the overall use of advanced biofuels has increased. Biofuels made up 15 percent of fuels consumed by domestic road traffic in 2023, up from 12 percent in 2022. Due to the increased use of EVs, the total volume of fuels sold in Norway has decreased in recent years. The overall volume of biofuel has therefore been relatively stable, since the percentage of biofuels has increased[25].

Road taxes (no; veibruksavgift) for all biofuels were introduced in 2020. The taxation of bioethanol is around 50 percent lower than that on standard gasoline. The road tax for biodiesel is similar to that for conventional diesel, with biodiesel taxes being 10 percent higher in 2024[26]. Legislation passed in 2016 mandates that biofuels and liquid biofuels must have a minimum of 50 percent lower life cycle greenhouse gas (GHG) emissions than fossil fuels[16].

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[21] Transportøkonomisk institutt (2022). "Kjøretøyenes demografi".
[22] Statistics Norway 07849: Registered vehicles, by type of transport and type of fuel (M) 2008 - 2023, 2024
[23] https://www.regjeringen.no/no/tema/transport-og-kommunikasjon/veg_og_vegtrafikk/faktaartikler-vei-og-ts/norge-er-elektrisk/id2677481, 2024
[24] https://lovdata.no/dokument/SF/forskrift/2004-06-01-922/KAPITTEL_5#KAPITTEL_5, 2024
[25] https://www.miljodirektoratet.no/aktuelt/fagmeldinger/2024/juli-2024/nye-omsetningskrav-ga-mer-biodrivstoff-i-2023, 2024
[26] https://www.skatteetaten.no/satser/veibruksavgift/?year=2024#rateShowYear, 2024

In 2023, more than 80 percent of the advanced biofuels in the Norwegian transportation sector were derived from used frying oil and animal fat, mostly imported from the USA and China. There were no reports of biofuels sold in Norway containing soy or palm oil in 2023, aligning with the goal to reduce the use of raw materials with a high risk for deforestation[17].

5.3 Climate gas emissions (Scope 1 and 2)

Categorising the emissions, we have chosen to use the CBI guidelines for the emission calculations. CBI's *Land Transport Background Paper* underlines the focus on tailpipe emissions because of their dominance, the need to send strong signals to vehicle purchasers, and the need to promote technologies and infrastructure that have the potential to radically shift emissions trajectories and avoid fossil fuel lock-in[27]. We do, however, include information on indirect emissions related to power production.

5.3.1 Indicators

In this analysis, we are using two relevant climate gas emission indicators for vehicles:

- Emissions per kilometre [gCO2/km]
- Emissions per passenger-kilometre [gCO2/pkm] or tonne-kilometre [gCO2/tkm]

The vehicle fleet composition and emissions from the different types of vehicles are used to calculate the emissions per kilometre.

A passenger-kilometre, abbreviated as pkm, is the unit of measurement representing the transport of one passenger over one kilometre. Passenger-kilometres are found by multiplying the number of passengers by the corresponding number of kilometres travelled.

Vehicle occupancies of 1.7 persons in passenger vehicles and 1.5 persons in light-duty vehicles have been adopted in this analysis.[28]

For heavy-duty vehicles, a more relevant factor is the tonne-kilometre, abbreviated as tkm. This unit represents the transportation of one tonne over one kilometre. Freight in heavy-duty vehicles in Norway is assumed to be 10.09 tonnes per vehicle, in line with Norwegian statistics.[29]

5.3.2 Direct emissions (tailpipe) - Scope 1

Baseline of Fossil Fuel Combustion Vehicles and Avoided Emissions from EVs

Under scope 1 emissions, we calculate the "Direct tailpipe CO_2 emissions from fossil fuels combustion" avoided[19].

The estimation of the baseline is performed through three steps:

1. Estimating the gross CO_2 emissions per km (c) from the average vehicle that is being substituted by the zero-emission vehicle.
2. Multiplied by the number of km (d) the vehicle is estimated to travel.
3. Multiplied by the number (n) of vehicles substituting for fossil vehicles in the portfolio.

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[27] C. Moore, J. Leigh-Bell and H. Jackson, "Land Transport Criteria Version 2," Climate Bonds intitiative, London, 2020.
[28] https://www.ssb.no/transport-og-reiseliv/artikler-og-publikasjoner/mindre-utslipp-per-kjorte-kilometer
[29] https://www.ssb.no/transport-og-reiseliv/artikler-og-publikasjoner/elbiler-reduserer-utslipp-per-personkilometer?tabell=405070, 2022

This can be described in the following equation:

$$E_{baseline} = c_{weighted\ average} \cdot d_y \cdot n_{total} = E_{avoided} \qquad (1)$$

All EVs and fuel cell vehicles are considered eligible with zero tailpipe emissions. Therefore, for scope 1 calculations, the emissions from these vehicles are set to zero, and the baseline will amount to the total avoided emissions.

To estimate the annual emissions avoided by the eligible assets, projections are made for direct tailpipe CO_2 emissions from fossil fuel combustion in the national vehicle fleets.

For the substituted fossil-fuelled vehicles, emission data are retrieved from recognised test methods and not actual registrations of emissions in a Nordic climate.

Biofuels are already, to some degree, mixed with fossil fuels in Norway. The reduced emissions due to these contributions are considered in the emission calculations from fossil fuel vehicles. As fossil fuel vehicle emissions are the baseline for EV emission calculation, the biofuels are in effect reducing the impact of the EVs.

Norway aims to reduce emissions from fossil-fuelled vehicles by using biofuel in the fuel sold before 2030. The marginal emission reduction possibly obtained through these political goals between 2024-2030 has been accounted for in the analysis. It is assumed that the biofuel share in the fuel mix will remain constant between 2030 and the end of the vehicles' lifetime, assumed to be in 2041, 2039 and 2037 for passenger vehicles, light-duty vehicles and heavy-duty vehicles registered in 2024, respectively.

To estimate the weighted average of emissions per fossil vehicle ($c_{weighted\ average}$) we use the average annual emission from new vehicle models from 2011-2024[30].

To estimate the distance travelled by the average vehicle, we assume that EVs drive the average of the total vehicle portfolio for each vehicle type in each country, each year it is used in its lifetime. Statistics of annual driven distance by electric, diesel and gasoline cars younger than 10 years build up under this assumption[31].

Traffic volumes per passenger vehicle and light-duty vehicle have shown a historic decline. We use linear regression on the publicly available datasets and extrapolate until 2041, 2039 and 2037, respectively. This is a conservative approach as it is likely, at some point, to see flattening.

Emission Factors – Scope 1

Table 5-1 to Table 5-3 present the calculated emission factors and CO_2 emissions in a year for the relevant vehicle categories. The numbers are based on calculated gross tailpipe CO_2 emissions for the average vehicle produced in each of the years between 2011-2024, biofuel and fossil fuel content in petrol/diesel pumped in each year between 2024 and the end of the vehicles' lifetime, as well as the travelled annual distance for the average vehicle.

[30] https://ofv.no/CO2-utslippet/co2-utslippet, 2025
[31] https://www.ssb.no/en/statbank/table/08307, 2025

*Table 5-1 **Passenger vehicles:** Greenhouse gas emission factors for substituted fossil vehicles and EVs, average direct emissions [CO2-eq]*

	Direct emissions per passenger-km [gCO2/pkm]	Direct emissions per km [gCO2/km]	Direct emissions per vehicle per year [kgCO2/vehicle/year]
Substituted fossil passenger vehicles – average	57	97	791
Electric passenger vehicles	0	0	0

*Table 5-2 **Light-duty vehicles:** Greenhouse gas emission factors for substituted fossil vehicles and EVs, average direct emissions [CO2-eq]*

	Direct emissions per passenger-km [gCO2/pkm]	Direct emissions per km [gCO2/km]	Direct emissions per vehicle per year [kgCO2/vehicle/year]
Substituted fossil light-duty vehicles – average	133	199	2,178
Electric light-duty vehicles	0	0	0

*Table 5-3 **Heavy-duty vehicles:** Greenhouse gas emission factors for substituted fossil vehicles and EVs, average direct emissions [CO2-eq]*

	Direct emissions per passenger-km [gCO2/tkm]	Direct emissions per km [gCO2/km]	Direct emissions per vehicle per year [kgCO2/vehicle/year]
Substituted fossil heavy-duty vehicles – average	101	1,021	32,556
Electric heavy-duty vehicles	0	0	0

5.3.3 Indirect emissions (power consumption only) – Scope 2

Under scope 2 emissions, we calculate the "Indirect emissions from electricity consumption"[19].

The GHG emission intensity baseline for power consumption may be calculated with different system boundaries. Norway trades power internationally through an interconnected European electricity grid. For impact calculations of all power consumption, and even electrification of transportation, the regional or European production mix is more relevant than the national power production mix and is the basis for the main analysis in this report. We have, however, also included calculations of indirect emissions from power production, setting the system boundary at national borders.

The direct emissions in power production in Europe (EU27, UK and Norway) [32] is expected to be dramatically reduced in the coming decades. The emission trajectory used in this analysis takes into consideration the 1.5°C scenario and a substantial reduction of emissions from the power sector

[32] EU27, UK and Norway include all European countries except Iceland, Cyprus, Ukraine, Russia, and Moldova, plus United Kingdom and Norway.

towards zero emissions in 2050. This aligns with the EU's ambitious goal of decarbonising the power sector[33].

For this section, a three-year average emission factor for power in Europe (EU27, UK and Norway) is applied. The most recent numbers are for 2023, so the interval 2021-2023 is used.[34] These values will vary from year to year. To demonstrate how emissions vary depending on grid factor and for clarity when comparing avoided emissions from other segments, two more grid factors introduced in section 0 are included: Norwegian physically delivered electricity in 2023 and the Norwegian residual mix for 2023.[35] The mentioned grid factors are shown in the table below.

Table 5-4 Electricity production greenhouse gas factors for European average production mix and Norwegian electricity mixes [CO2-eq]

Scenario	Emission factor [gCO2/kWh]
European (EU27, UK and Norway) production mix average 2021-2023	231.4
Norwegian physically delivered electricity 2023	15
Norwegian residual mix 2023	598.6

The following calculations use the emission factor as an average from the European 2023 baseline, see Table 5-4, and the expected lifetime for each type of vehicle, following the expected declining trajectory. The projected trajectories related to European power production, from 2024 and forward, will impact the indirect emissions and avoided emissions from the vehicle portfolio. The same method is not used to estimate the emission factor based on the Norwegian-only mixes.

The energy consumption of EVs is dependent on size and outdoor temperature. There is not sufficient available data to ensure an accurate estimation of energy consumption for the average EV. In these calculations, the average for all currently available EV models in the EV Database, 0.189 kWh/km, is applied[36]. For the energy consumption of light-duty vehicles, 0.26 kWh/km is applied.[37]For heavy-duty vehicles, an average for recent EV trucks of 1.25 kWh/km has been used.[38]

In Table 5-5 to Table 5-7, indirect emission factors are presented for the European power production mix and the Norwegian electricity mix for EVs. Fossil fuelled alternatives do not involve electricity consumption or indirect emissions.

[33] G. Amanatidis, "Briefing - European policies on climate and energy towards 2020, 20230 and 2050," European Parliament Policy Department for Economic, Scientific and Quality of Life Policies Directorate-General for Internal Policies, Brussels, 2019
[34] https://www.aib-net.org/facts/european-residual-mix/2023, 2024
[35] https://www.nve.no/energi/energisystem/energibruk/stroemdeklarasjoner/, 2024
[36] https://ev-database.org/cheatsheet/energy-consumption-electric-car, 2025
[37] https://bransch.trafikverket.se/contentassets/5d86ee446e8a4628bd5aacc27cb213eb/emissionsfaktorer-vagtrafik-2022-2030-2045_v2.xlsx, 2024
[38] Transportøkonomisk institutt (2021). "Grønn lastebiltransport? Teknologistatus, kostnader og brukererfaringer»

*Table 5-5 Annual average GHG emission factors [CO2-eq] per distance for electric **passenger vehicles**, based on EU27 plus UK and Norway average power production mix 2021-2023, Norwegian physically delivered electricity mix 2023 and Norwegian residual mix 2023*

	Indirect emissions per passenger-km [gCO2/pkm]	Indirect emissions per km [gCO2/km]
European power production 2021-2023 average	16.7	28.4
Norwegian physically delivered electricity 2023	1.7	2.8
Norwegian residual mix 2023	66.6	113.1

*Table 5-6 Annual average GHG emission factors [CO2-eq] per distance for electric **light-duty vehicles**, based on EU27 plus UK and Norway average power production mix 2021-2023, Norwegian physically delivered electricity mix 2023 and Norwegian residual mix 2023*

	Indirect emissions per passenger-km [gCO2/pkm]	Indirect emissions per km [gCO2/km]
European power production 2021-2023 average	27.6	41.3
Norwegian physically delivered electricity 2023	2.6	3.9
Norwegian residual mix 2023	103.8	155.6

*Table 5-7 Annual average GHG emission factors [CO2-eq] per distance for electric **heavy-duty vehicles**, based on EU27 plus UK and Norway average power production mix 2021-2023, Norwegian physically delivered electricity mix 2023 and Norwegian residual mix 2023.*

	Indirect emissions per passenger-km [gCO2/tkm]	Indirect emissions per km [gCO2/km]
European power production 2021-2023 average	20.7	208.8
Norwegian physically delivered electricity 2023	1.9	18.8
Norwegian residual mix 2023	74.2	748.3

Note that there are indirect emissions related to fossil fuel as well, scope 3 emissions, which are not included in this analysis. Scope 3 emissions differ between fossil and electric vehicles mostly due to the batteries, where there is rapid technology development.

5.4 Impact assessment – Electric vehicles

The 4,174 eligible vehicles in SpareBank 1 Nord-Norge's portfolio are estimated to drive 34.4 million km per year. The available data from the bank includes the number of vehicles per registration year and related portfolio volume for each vehicle type.

Table 5-8 Number of eligible passenger vehicles and expected yearly mileage

	No. of vehicles	Sum distance [km/year]	Sum distance [pkm/year]
Passenger vehicles	4,018	32.6 mill.	55.5 mill.
Light-duty vehicles	152	1.7 mill.	2.5 mill.
Heavy-duty vehicles	4	0.1	1.3
Sum portfolio	**4,174**	**34.4 mill.**	**59.3 mill.**

The tables below summarise, in rounded numbers, the lower CO_2 emissions compared to the baseline for the eligible assets in the portfolio in an average year in the lifetime of the vehicles in the portfolio, presented as reductions in direct emissions and indirect emissions. Note that the indirect emissions are only calculated for EVs and not for fossil-fuelled alternatives.

Direct emissions in the following tables are calculated by multiplying distance travelled [km] by the vehicles in the portfolio in a year, by the specific emission factors [gCO2/km]. Indirect emissions are calculated by multiplying distance travelled [km] by the vehicles in the portfolio in a year by the specific emission factors [gCO2/km].

In Table 5-9 the direct, indirect and sum of avoided emissions for the portfolio are shown based on all indirect emission grid factors mentioned in the section 0, i.e. the European power production mix 2021-2023, Norwegian electricity mix considering export/import and Norwegian residual mix for 2023. The table enables comparison with the bank's impact reporting on other green bond asset classes and financed emissions across all assets – green and others. The sum of direct and indirect emissions is also shown as scaled by the bank's share of financing, based on an average LTV for the portfolio.

Table 5-9 The portfolio's estimated impact on GHG emissions. Indirect emissions are based on the three emission factors. Total impact is also shown as scaled based on the bank's share of financing

	Avoided CO_2 emissions compared to baseline [tonnes of CO2-eq/year]		
	European production mix 2021-2023	Norwegian physically delivered el. 2023	Norwegian residual mix 2023
Direct emissions only (Scope 1)	3,640	3,640	3,640
Indirect emissions of EVs only (Scope 2)	-1,020	-100	-4,040
Direct and indirect	**2,620**	**3,540**	**-400**
Direct and indirect – scaled by the bank's share of engagement	**1,710**	**2,320**	**-270**

Note that the high residual mix for Norway lead to net negative avoided emissions.

The reduction in direct emissions corresponds to 2.4 million litres gasoline saved per year.

6 Renewable energy

Hydropower has played a significant role in Norway's power production since the Industrial Revolution. Hydropower remains a crucial component of the national energy mix, producing 140 TWh annually and accounting for 89 percent of the national electricity production[39]. Onshore wind and solar power account for 10 percent (15 TWh/yr) of the national power production. The Norwegian Government has set a target to increase the electricity production from solar energy to 8 TWh by 2030.

Power production development in Norway is strictly regulated and subject to licensing and is overseen by the Norwegian Water Resources and Energy Directorate (NVE), a directorate under the Ministry of Petroleum and Energy. Licenses grant rights to build and run power production installations under explicit conditions and rules of operation. NVE emphasises preserving the environment. The Norwegian part of the NVE homepage gives detailed information about different requirements for different kinds of projects[40].

Data about the Norwegian assets (power plants) is available from the NVE, as all assets are subject to licensing.

6.1 Eligibility

The SpareBank 1 Nord-Norge's Green Bond Framework pertains to equipment, development, manufacturing, construction, operation, distribution and maintenance of renewable energy power plants generating electricity from solar power, wind power and hydropower. The green loan portfolio of SpareBank 1 Nord-Norge assessed in this report contains renewable energy power plants generating electricity from hydropower and wind power.

The EU Taxonomy's "Do no significant harm" (DNSH) criteria for hydropower, wind power and solar power address environmental, social and governance (ESG) issues. The adaptation and resilience component in Climate Bonds Initiative (CBI) hydropower eligibility criteria and the DNSH criteria is, in the Norwegian context, to a large degree covered by the relevant requirements in the Norwegian regulation of energy plants. All Norwegian hydropower and wind power assets conform to very high standards regarding environmental and social impact. Portfolio alignment with DNSH requirements has not been assessed in detail.

6.1.1 Hydropower

According to the bank's green bonds framework, hydropower plants in Norway qualify for green bonds if they meet one of the following criteria:

i. life cycle emissions of less than 100 gCO2-eq/kWh,

ii. power density greater than 5 W/m^2, or

iii. the electricity generation facility is a run-of-river plant and does not have an artificial reservoir

The eligibility criteria are formulated in line with the CBI criteria[41], and the emissions threshold is in line with the threshold of 100 gCO2-eq/kWh in the June 2021 EU Taxonomy Annex I to the Commission Delegated Regulation[42].

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[39] Statistic Norway Table 08307: Production, imports, exports and consumption of electric energy: https://www.ssb.no/en/statbank/table/08307
[40] https://www.nve.no/konsesjonssaker/konsesjonsbehandling-av-vannkraft/
[41] https://www.climatebonds.net/standard/hydropower
[42] https://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf

Hydropower plants with power density over 5 W/m^2 are exempt from the most detailed investigations. For Norwegian hydropower assets, these criteria are fulfilled, and most assets overperform radically. All run-of-river power stations have no or negligible negative impact on GHG emissions. Due to the cold climate, Norwegian reservoirs are not exposed to cyclic revegetation of impoundment, and hence the negative impacts on GHG emissions from these reservoirs are minuscule. Hydropower stations with high hydraulic head or relatively small, impounded areas have high power density.

The eligibility criteria mentioned above are central to the EU Taxonomy. Most DNSH requirements are covered by the current national regulation of hydropower, however, with exemptions.

6.1.2 Wind power

According to the bank's green bonds framework, wind power plants qualify for green bonds if they are onshore or offshore wind energy generation facilities.

According to the CBI wind eligibility criteria[43], onshore wind energy generation facilities are automatically eligible. All onshore Norwegian wind power plants in the portfolio thus fulfil this criterion.

6.2 Eligible assets in portfolio

SpareBank 1 Nord-Norge's portfolio contains 109 Norwegian hydropower and wind power plants in operation of varied age and size, with installed capacities ranging from less than one MW to more than a hundred MW. Approximately 95 percent of the plants are hydropower facilities. These are run-of-river plants or small reservoir hydropower plants, which hence have a higher power density of several thousand W/m^2 (ratio between capacity and impounded area).

Multiconsult can verify that SpareBank 1 Nord-Norge's eligible assets have low to negligible GHG emissions related to construction and operation.

6.3 Impact assessment – Renewable energy

6.3.1 CO_2 emissions from renewable energy power production

All power production facilities have a negative impact on GHG emissions. Instead of calculating the impact on GHG emissions across SpareBank 1 Nord-Norge's portfolio, we refer to AIB[44]. AIB is responsible for developing and promoting the European Energy Certificate System (EECS).

The average emission factor for all European hydropower is 6 gCO_2e/kWh, used by the AIB, as referred to by NVE[45], in their calculations of the European residual mix. The value is based on a life cycle analysis (LCA) where all upstream and downstream effects in the whole value chain for power production are included.

In subsequent assessments, we are using the AIB emission factors for all assets, even though the factors are reported higher than in other credible sources in a Norwegian context. For instance, Østfoldforskning calculated the average GHG emission intensity of Norwegian hydropower, across all categories using LCA, to be 3.33 gCO_2e/kWh[46].

[43] https://www.climatebonds.net/standard/wind
[44] https://www.aib-net.org/
[45] https://www.nve.no/norwegian-energy-regulatory-authority/retail-market/electricity-disclosure-2018/
[46] https://norsus.no/wp-content/uploads/AR-01.19-The-inventory-and-life-cycle-data-for-Norwegian-hydroelectricity.pdf, 2019

SpareBank 1 Nord-Norge's portfolio contains many run-of-river and small reservoir hydropower assets, and the AIB emission factor is therefore regarded as conservative in an impact assessment setting. Given an average emission factor for all European hydropower of 6 gCO_2e/kWh, the positive impact of hydropower is 130 gCO_2e/kWh compared to the European electricity mix baseline of 136 gCO_2e/kWh from Table 2-1.

The equivalent emission factor for wind power is set by AIB at 20 gCO_2e/kWh. The positive impact of wind power is then 116 gCO_2e/kWh compared to the European electricity mix baseline of 136 gCO_2e/kWh.

When applying the Norwegian location-based production mix and market-based residual mix emission factors from Table 2-1 as baselines, the positive impact of hydropower and wind power changes significantly. The Norwegian location-based production mix, as baseline results in a positive impact of hydropower of 9 gCO_2e/kWh, but no positive impact of wind power. The Norwegian market-based residual mix as baseline hoists the positive impact of hydropower and wind power to 593 and 579 gCO_2e/kWh, respectively.

6.3.2 Power production estimates

Production and installed capacity have been provided by the bank and verified/evaluated by Multiconsult using the NVE's hydropower database[47] , wind power database[48] and licensing cases[49].

It is important to note that the indicated power production capacity in the licensing documents does not necessarily represent what can realistically be expected from the plant over time. For hydropower, the hydrology is uncertain, and unfortunately, often overestimated in early project phases. Also, production figures normally do not account for planned and unplanned production stops, due to accidents, maintenance, etc. Research on small hydropower facilities has shown that actual production is often more than 20 percent lower than the licensing/pre-construction figures. There is no equivalent evidence to claim the same mismatch for large hydropower facilities.

6.3.3 Portfolio analysis – Norwegian renewable energy plants

The eligible plants in SpareBank 1 Nord-Norge's portfolio are expected to have the capacity to produce about 224 GWh per year, scaled by the bank's engagement (share of financing). The available data from the bank and open sources include:

- Type of facility (hydropower/wind)
- Installed capacity
- Estimated or recorded production
- Age

To cross-check the data, the estimated power production for the assets has been obtained from the NVE database [47], wind power database[50] or licensing documents[49]. Table 6-1 describes the power plants identified in the mentioned database. The table shows the number of power plants, installed

[47] https://www.nve.no/energi/energisystem/vannkraft/vannkraftdatabase/
[48] https://www.nve.no/energi/energisystem/vindkraft/data-for-utbygde-vindkraftverk-i-norge/, 2024
[49] https://www.nve.no/konsesjon/konsesjonsbehandling-av-solkraftverk/
[50] https://www.nve.no/energi/energisystem/vindkraft/data-for-utbygde-vindkraftverk-i-norge/, 2024

capacity, estimated and expected production for the assets in SpareBank 1 Nord-Norge's portfolio. Expected and estimated production have been scaled by the bank's share of financing.

Due to the frequently overestimated annual production in small hydropower plants, the expected impact is conservatively calculated by reducing the estimated production by 20 percent (80% efficiency).

Table 6-1 Capacity and annual production of identified eligible plants. Production scaled to reflect the bank's share of financing

	No. of plants	Capacity [MW]	Estimated production [GWh/year]	Expected production [GWh/year]
Identified eligible hydropower plants in the portfolio	104	455	190	167
Identified eligible wind power plants in the portfolio	5	225	57	57
Sum	**109**	**680**	**247**	**224**

Table 6-2 summarises the renewable energy production by the eligible assets in the portfolio in an average year, and the expected avoided CO_2 emissions of the energy production, in total and scaled to reflect the bank's share of financing.

Table 6-2 Expected annual power production and positive impact on GHG emissions

	Expected production [GWh/year]	Expected reduced CO_2 emissions compared to baseline [tonnes CO2-eq/year]		
		European electricity mix	Norwegian location-based production mix	Norwegian market-based residual mix
Identified eligible plants in the portfolio	1,476	188,706	11,254	872,029
Identified eligible plants in the portfolio – scaled	224	28,276	1,504	131,800