Report

DNB Electric Vehicles Portfolio – Impact Assessment

CLIENT

DNB Bank ASA

SUBJECT

Portfolio of Nordic Electric Vehicles

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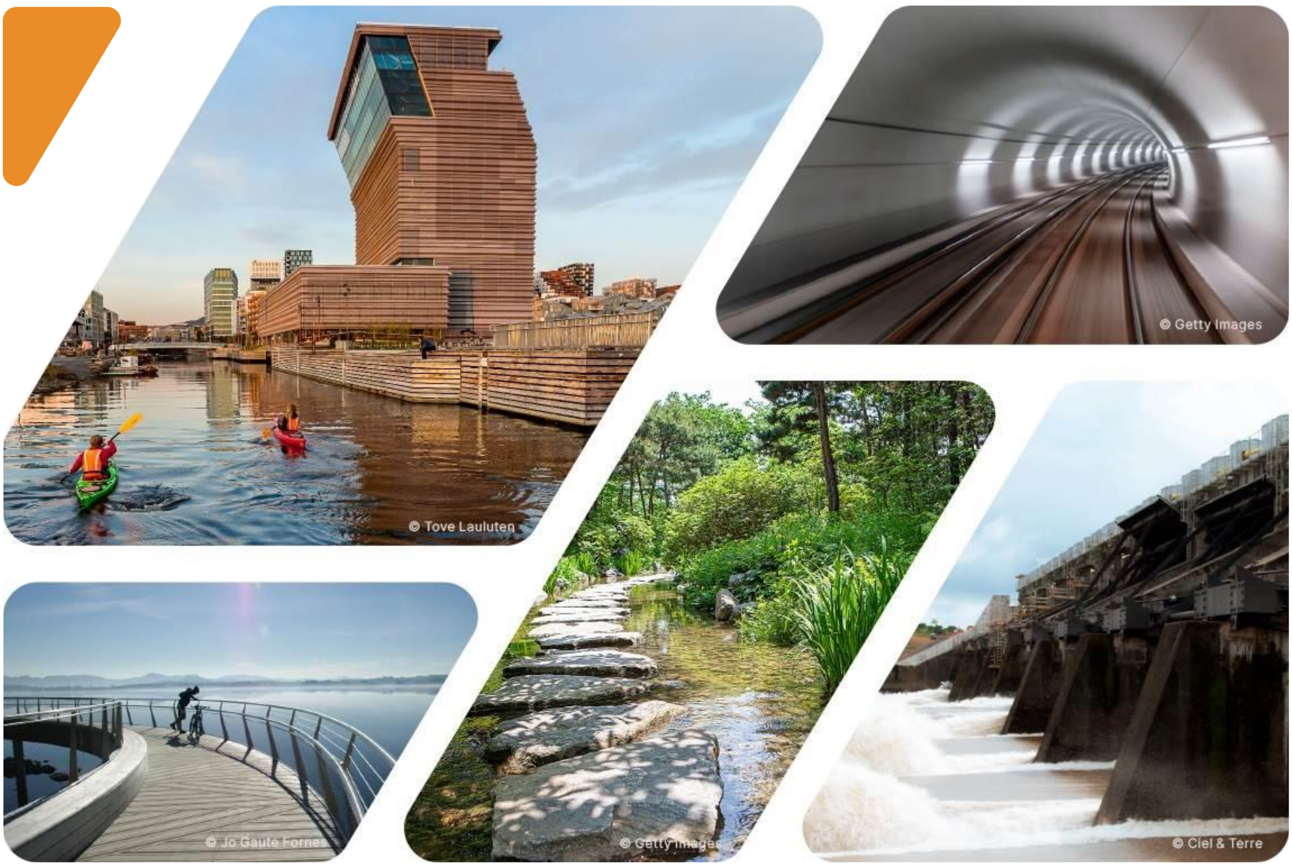

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Report

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1 Introduction

On assignment from DNB, Multiconsult assesses the impact of electric vehicles (EVs) in Norway, Denmark, and Sweden on greenhouse gas (GHG) emissions. The DNB EV portfolio is primarily composed of Norwegian and Swedish vehicles. Based on the number of EV loans, Danish vehicles constituted 5 percent of the portfolio in 2025, or 6 percent by loan balance in NOK. For the purposes of this analysis, they are assumed to have impacts equivalent to Norwegian vehicles.[1]

In this document, we briefly describe DNB's qualification criteria for Green Financing Instruments, the evidence for the criteria and the results of an analysis of the loan portfolio of DNB. For more information related to the eligibility criteria, we refer to DNB's website[2].

The eligible vehicles identified in the portfolio meet the technical eligibility criteria formulated by Climate Bonds Initiative [1] and in the EU Taxonomy [2].

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.

2 Electric Vehicle Eligibility Criteria

This report investigates the electric vehicle portfolio relevant under the "Zero carbon vehicles" criterion in DNB's Green Finance Framework:

- Fully electric, hydrogen or otherwise zero direct (tailpipe) CO2 emissions vehicles for the transportation of passengers or freight.

The portfolio examined includes solely electric vehicles financed by the bank, and the calculations include passenger vehicles and light-duty vehicles.

3 EV Policies and Regulations

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

3.1 Personal Mobility and the Car Fleet in Norway and Sweden

Personal mobility in Norway and Sweden is high, and privately owned passenger vehicles account for the largest share of road-based passenger transportation. Figure 3-1**Error! Reference source not found.** shows private car and bus/coach transport per capita across selected European countries. The share of private car transport is around 90% for Norway, Sweden and Denmark.

[1] For simplicity, the Danish EVs are modelled using Norwegian input parameters, including the Norwegian electricity emission factor. The location-based emission factor for Danish grid electricity (Energistyrelsen, *El-emissionsfaktoren 2024–2035*, September 2024) is materially higher than the Norwegian equivalent, reflecting Denmark's greater reliance on thermal and imported generation. The quantitative effect of this assumption is discussed in the results. Assumptions are retained for consistency with prior years.

[2] See https://www.ir.dnb.no/funding-and-rating/green-bond-framework

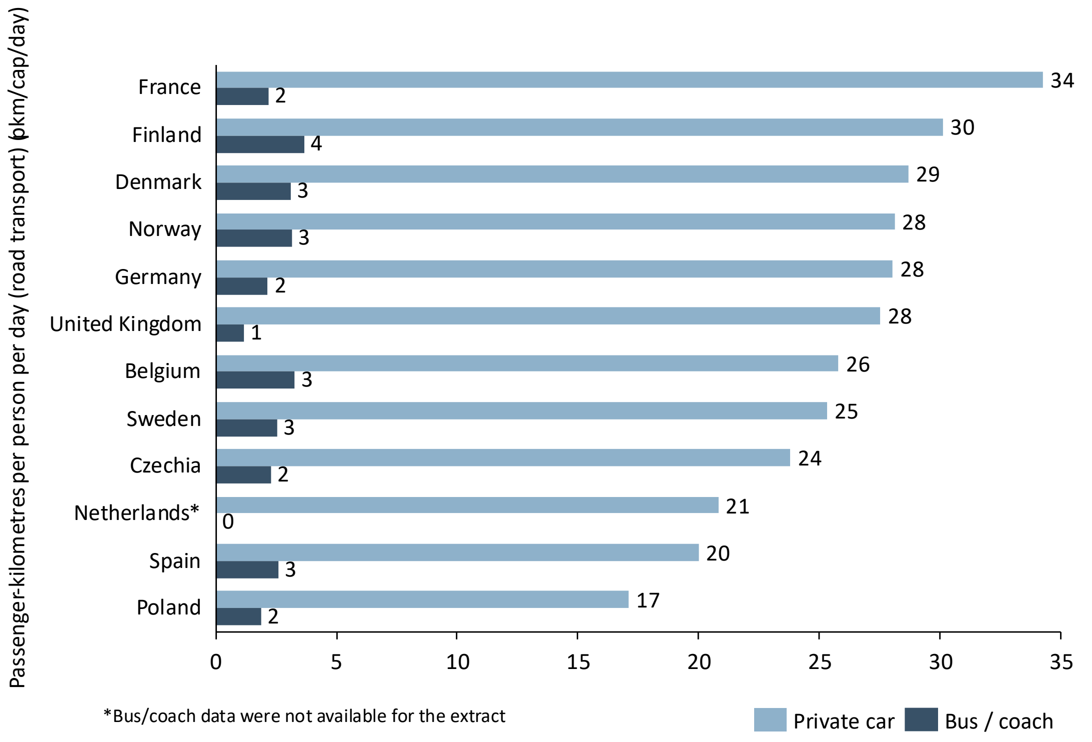

Figure 3-1 Passenger transport in selected countries in 2024[3] [passenger-kilometre per person per day]. Source: [3] [4]

Historical data indicate that the average distance driven annually by passenger vehicles in Norway and Sweden has been declining since 2007 and 2008. [5, 6] During these peak years, passenger vehicles in Norway were driven an average of 14,000 km annually, while in Sweden, the average was 13,000 km. The development of distance travelled on average has, in general, been similar in Norway and Sweden, except for a higher starting point in Norway and a more rapid reduction over the years.

In 2024, the average passenger vehicle travelled about 11,200 km in Norway and 11,400 km in Sweden. For light-duty vehicles, the average travelled distance was 13,400 km in Norway and 13,000 km in Sweden. [5, 6] 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.

In both countries, the average age of passenger vehicles scrapped for refund has increased by 1-2 years over the last five years. The average age was 19 years in Norway in 2025, and almost 20 years in Sweden in 2024. [7, 8] For Norwegian vans, the average age of scrapped vehicles was 17 years in 2025. [8] The history of modern EVs is relatively short, and there is currently no evidence that their lifetime differs from that of other vehicles. The average lifetime for passenger vehicles and light-duty vehicles in this analysis is set to 19 and 17 years, respectively. These assumptions apply to both Sweden and Norway, independent of fuel type.

3.2 Electric Vehicle Policy in Norway

The Norwegian government has, over time, with different administrations, had high ambitions regarding both electric vehicles and biofuel to reduce CO2 emissions. One of the Norwegian Government's targets was that all new passenger and light-duty vehicles sold should be zero-emission from 2025. [9]

[3] Figures show road-based transport only; rail is excluded. Data year varies by country (2023–2024 for most; Denmark 2016, Belgium 2017, the most recent years reported to ITF). The Swedish series contains a statistical break in 2016: and the current figure may understate Swedish car mobility relative to earlier data.

The passenger vehicle goal was all but achieved with 96 percent EVs in 2025, while the light-duty vehicle share was about 45 percent. [10] Another current target is that new heavy-duty vehicles should be zero-emission or biogas by 2030. [9]

The Norwegian EV policy, one of the most ambitious EV policy frameworks globally, has been driven by exemptions from VAT and registration tax, supplemented by early incentives such as toll road and ferry exemptions, free parking, and free urban charging. Following recent growth in EV sales, the Norwegian government has capped the VAT exemption at NOK 300,000 for 2026, regardless of the purchase price. [11] Many of the other benefits have been reduced or removed; however, EVs still pay up to 70 percent of standard toll road tariffs and 50 percent of standard parking and ferry tariffs. There were more than 945,000 electric passenger vehicles on Norwegian roads by the end of 2025, which accounts for almost 42 percent of the total passenger vehicle stock. [12]

3.3 Electric Vehicle Policy in Sweden

Sweden is experiencing growth in the EV fleet. By the end of 2025, more than 430,000 electric passenger vehicles were on the road in Sweden, excluding hybrids. This represents 9 percent of the total passenger fleet, up from 2 percent at the end of 2021. [13] However, progress has been slower than initially estimated, with 35 percent of new passenger vehicles being electric in 2024, down four percentage points from 2023. [14]

The 2017 policy document 'Klimapolitiska ramverket' set a target of a 70 percent reduction in emissions from domestic transport (excluding air travel) between 2010 and 2030. [15] One of the incentives to achieve the target was a bonus system for environmentally friendly vehicles. The first bonus system was introduced in 2007 and remained in place until January 2012. In July 2018, a new initiative, 'Klimatbonus,' was introduced, offering buyers of 'climate-friendly vehicles' a rebate based on the vehicle's expected emissions. [16] The *Klimatbonus* initiative was discontinued in 2024. More than SEK 14 billion was disbursed under the scheme. [17] The current *Klimatpremie* initiative targets electric light- and heavy-duty vehicles, not passenger vehicles. Among the support schemes are premiums for companies, municipalities and regions purchasing electric trucks. [18] In March 2026, a new electric car subsidy was introduced, aimed at households in rural municipalities with limited alternatives to car travel. [14, 19]

3.4 Biofuel Policy in Norway

Norway has an ambitious biofuel policy. Since 2018, legislation requires all road traffic petrol retailers to sell fuel containing biofuels. In 2025, the overall quota obligation of biofuels to road traffic was 20 percent, of which the advanced biofuel requirement was set at 12.5 percent. To incentivise the use of advanced biofuels, one litre of advanced biofuel counts as two litres of conventional biofuel for volumes exceeding the 12.5 percent advanced biofuel requirement. [20] Subsequently, the overall use of advanced biofuels has increased. In 2024, biofuels accounted for 16 percent of fuels used in domestic road transport, up one percentage point from 2023. As a result of increased EV adoption, total fuel volumes sold in Norway have declined in recent years - yet the absolute volume of biofuels sold has remained broadly stable, as the rising quota obligation has offset lower overall demand. [21]

Road taxes (no; veibruksavgift) for all biofuels were introduced in 2020. The tax on bioethanol is around 50 percent lower than that on standard gasoline. The road tax for biodiesel was the same as for conventional diesel in 2025. [22] Legislation passed in 2016 requires biofuels to deliver at least 50 percent lower life-cycle GHG emissions than fossil fuels. [20]

In 2024, almost 80 percent of the biofuels in the Norwegian transportation sector were derived from used frying oil and animal byproducts. There was also an increased use of advanced biofuels made from residues from paper production and sewage sludge. As in 2023, no biofuels sold in Norway were reported to contain soy or palm oil. Most biofuels sold in Norway in 2024 were made from imported raw materials, with 60 percent coming from China, the USA and Malaysia. Two percent of the biofuels were made of Norwegian raw materials. [21]

3.5 Biofuel Policy in Sweden

In 2017, the Swedish government set a target to reduce emissions from the transport sector by 70 percent by 2030 [15]. Among other measures, legislation was introduced to increase the share of biofuels in fuel sales. The European Commission has also approved Sweden's continued tax exemption for high-blend biofuels until the end of 2026, and the government has requested a further extension. [23, 24]

From 2020 to 2022, the regulations requiring retailers to increase the biofuel content in their fuel mix were progressively strengthened to achieve a linear reduction in emissions from transport fuel. In 2022 and 2023, the requirement was a 7.8 percent emission reduction for gasoline and 30.5 percent for diesel, compared to conventional fossil fuels. [25] The renewable fuel share increased from 21 percent in 2021 to a peak of 27.6 percent in 2022. [26]

Following rising living costs and fuel prices, the government decided in 2023 to significantly reduce the requirements for 2024–2026 to 6 percent for both gasoline and diesel. [27] Following the reduced biofuel requirements, the renewable biofuel share fell to 13.4 percent of the fuel mix in 2024, compared with 26.4 percent in 2023. [26] Over the same period, road transport emissions increased by 18 percent. [28] From mid-2025, the requirements were increased again, to 10 percent for both fuel types. [25]

HVO[4], FAME[5], and ethanol are the most common biofuel components in Swedish liquid fuels. Animal fats and vegetable oils are the main raw materials, and mostly imported from Europe, with smaller shares originating from Asia and Oceania. [26]

[4] Hydrotreated vegetable oils
[5] Fatty acid methyl esters

4 Climate Gas Emissions (Scope 1 and 2)

Categorizing the emissions, we 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. [29] We do, however, also include information on indirect emissions related to power production.

4.1 Emission Indicators

The relevant GHG emission indicators for vehicles that are applied are:

- 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 is 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.

A vehicle occupancy of 1.7 persons in passenger vehicles and 1.5 persons in a light-duty vehicle have been adopted in this analysis. [30, 31] Swedish light-duty vehicles statistics include lorries with maximum load weight of up to 3.5 tonnes, in which only the smaller vehicle segment is relevant for EV substitution. An occupancy of 1 has been estimated for Swedish light-duty vehicles [31], but we assume similar driving patterns and transport work performed by the light-duty EVs in Norway and Sweden.

4.2 Direct Emissions (Tailpipe) - Scope 1

4.2.1 Baseline of Fossil Fuel Combustion Vehicles and Avoided Emissions from EVs

Under scope 1 emissions, we calculate the avoided "Direct tailpipe CO2 emissions from fossil fuels combustion" [32].

The estimation of the baseline is performed through three steps:

1. Estimating the gross CO2 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 fossil vehicles in the portfolio.

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 CO2 emissions from fossil fuel combustion in the national vehicle fleets.

For the substituted fossil-fuelled vehicles, emission data are retrieved from recognized test methods rather than real-world emissions measurements under Nordic driving conditions.

Both Norway and Sweden aim to reduce emissions from fossil fuelled vehicles by using biofuel in the fuel sold before 2030, c.f. sections 3.4 and 3.5. Biofuels are already to some degree mixed with fossil fuels in both Norway and Sweden. The marginal emission reductions possibly obtained through these political goals between 2025-2030 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 EVs. 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 2043 and 2041 for passenger vehicles and light-duty vehicles registered in 2025, 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 2011-2025. [33, 34]

To estimate the distance travelled by the average passenger vehicle, we assume that EVs drive the annual average distance of the total passenger vehicle fleet for each year of their lifetime. Statistics on annual driving distances for electric, diesel, and gasoline vehicles under 10 years of age support this assumption.

Figure 4-1 shows the average yearly distance travelled by passenger cars and light-duty vehicles in Norway and Sweden, illustrating a historic decline in traffic volumes per vehicle. [5, 6] We use linear regression on the publicly available dataset and extrapolate the driven distance for each year until the end of the vehicles' lifetimes. This is a conservative approach, as the trend is likely to flatten at some point.

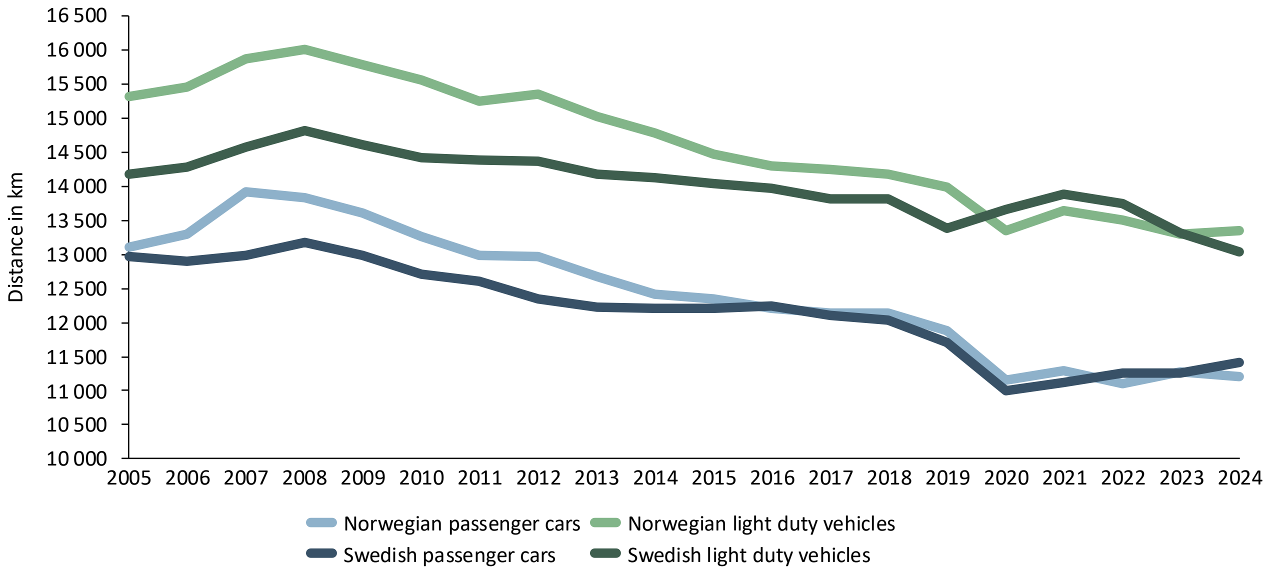

Figure 4-1 Average travelled distance per passenger vehicles 2005-2024 [km]. Source: [5, 6]

4.2.2 Emission Factors - Scope 1

Table 4-1 and Table 4-2 present the resulting emission factors and annual GHG emissions for the relevant vehicle categories. The numbers are based on calculated gross tailpipe CO2 emissions for the average vehicle produced in each year between 2011 and 2025, biofuel- and fossil-fuel content in petrol/diesel pumped in each year between 2025 and 2043, and the travelled annual distance for the average vehicle.

Table 4-1 Passenger vehicles: GHG emission factors (CO2-equivalents), average direct emissions.

	Direct emissions substituted fossil passenger vehicles – Average Norway	Direct emissions substituted fossil passenger vehicles - Average Sweden[6]	Direct emissions EVs
Emissions per passenger-km	56 gCO2/pkm	52 gCO2/pkm	0 gCO2/pkm
Emissions per km	95 gCO2/km	89 gCO2/km	0 gCO2/km
Emissions per vehicle per year	798 kgCO2/vehicle/year	748 kgCO2/vehicle/year	0 kgCO2/vehicle/year

Table 4-2 Light-duty vehicles: GHG emission factors (CO2-equivalents), average direct emissions.

	Direct emissions substituted fossil light-duty vehicles – Average Norway	Direct emissions substituted fossil light-duty vehicles - Average Sweden[7]	Direct emissions EVs
Emissions per passenger-km	133 gCO2/pkm	124 gCO2/pkm	0 gCO2/pkm
Emissions per km	200 gCO2/km	185 gCO2/km	0 gCO2/km
Emissions per vehicle per year	2,020 kgCO2/vehicle/year	1,738 kgCO2/vehicle/year	0 kgCO2/vehicle/year

4.3 Indirect Emissions (Power Consumption) - Scope 2

Under scope 2 emissions, we calculate the "Indirect emissions from electricity consumption" [32].

4.3.1 Electricity Production Mix

In 2024, renewables accounted for 99 percent of the total (157 TWh) Norwegian electricity production, the final percentage being thermal power production from natural gas, biomass, and waste heat. [35] Swedish electricity production had a combined share of renewables and nuclear energy of 93 percent of the total production (172 TWh). [36]

As shown in Figure 4-2, the Norwegian production mix in 2024 (89 percent hydropower and 9 percent wind power) resulted in emissions of 7 gCO2/kWh, as calculated by the Association of Issuing Bodies (AIB). [37] In Sweden, the electricity production mix (38 percent hydropower, 24 percent wind and 29 percent nuclear) gave specific emissions of 5 gCO2/kWh. [37] In the figure, the production mixes for other selected European states are included for illustration.

[6] Decrease from the previous year due to lower emission factor for newer fossil-car vintages. An additional decrease in emissions per vehicle per year is also due to an increase in the average lifetime of cars, cf section 3.1.
[7] Increase in average lifetime of cars, cf section 3.1, giving a net decrease in emissions per vehicle per year.

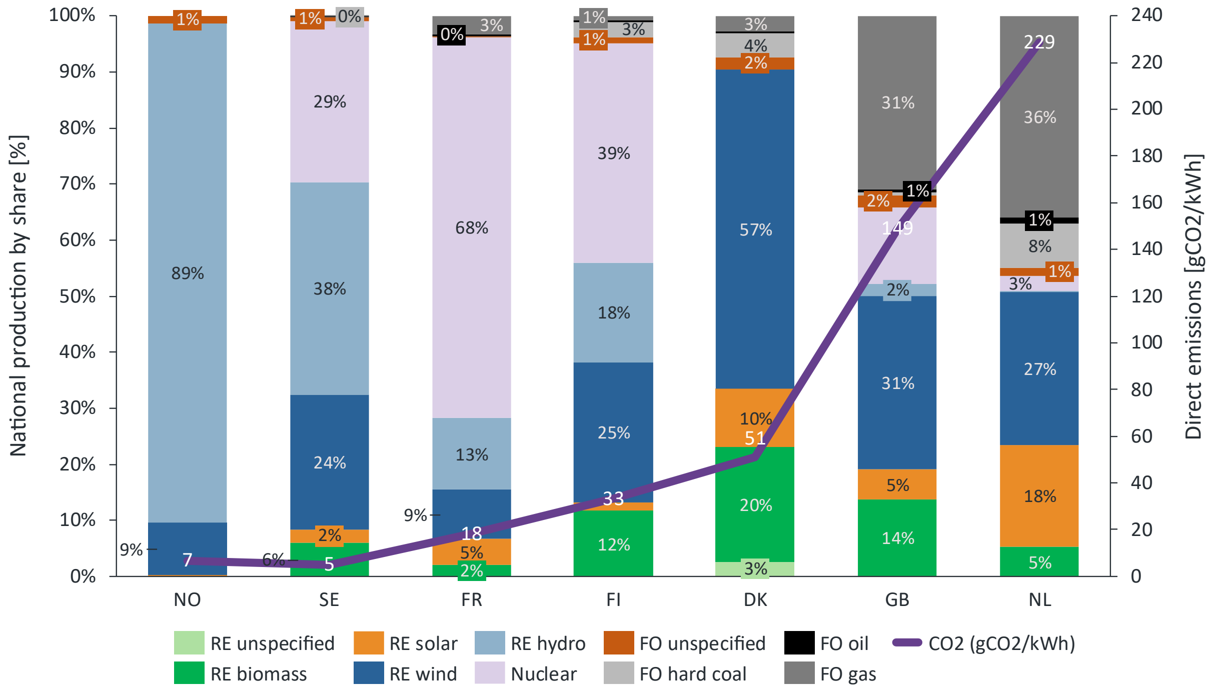

Figure 4-2 National electricity production mix in selected European countries. Source: [37]

4.3.2 CO2 Emissions Related to Electricity Demand

Power is traded internationally in an interconnected European electricity grid. Given the variation in national production mixes shown above, the GHG emission intensity for power consumption depends on the choice of system boundaries. 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.

The direct emissions in power production in Europe (EU27+UK+Norway) are expected to be dramatically reduced in the coming decades. Figure 4-3 illustrates the emission trajectory of the European (EU27, including the UK and Norway)[8] electricity mix from 2024 toward 2050. This mix is used as the basis for the scope 2 emission calculations for EVs in this report. Due to the climate urgency, the trajectory takes into consideration the 1.5 °C scenario and a substantial reduction of emissions in the power sector that will have close to zero emissions in 2050. This is in line with the EU's ambitious decarbonisation targets of the power sector.

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

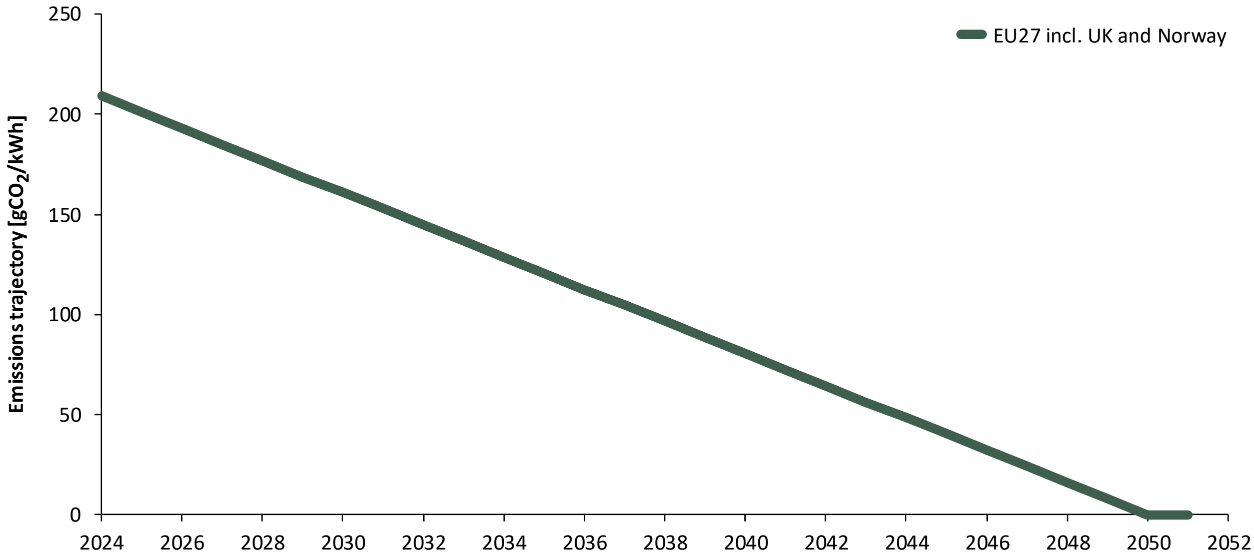

Figure 4-3 Direct CO2 emissions in the European electricity production mix, trajectory from 2024 to a zero target in 2050. Source: [37], Multiconsult

We have also included calculations setting the system boundary at national borders. Table 4-3 shows the five GHG emission factors applied in this analysis.

The first row in Table 4-3 illustrate the emission factor related to yearly power production for European countries (EU27 incl. UK and Norway), as an average of the last three years with available data. This value will vary from year to year.

The next two rows are the Norwegian physically delivered electricity factor for 2024 from the Norwegian Water Resources and Energy Directorate (NVE) [38] and the Norwegian residual mix for 2024, as calculated by AIB [37], both recommended for the calculation of financed GHG emissions in Norway. [39] They are included to demonstrate how emissions vary depending on the grid factor, and for clarity when comparing avoided emissions from the green portfolio with total portfolio calculations.

The last two rows show similar factors for Sweden. The corresponding Swedish residual mix for 2024 from AIB is used for Swedish emissions. To represent current emissions from Swedish electricity production, including export/import, a factor from the Swedish Energy Agency recommended when calculating emissions from biofuel emissions has been used. All five mixes are applied for the indirect emission calculations of the DNB YE-2025 portfolio[9].

[9] The same factors, but for the years 2021-2023 and 2023 only, were applied for the YE-2024 portfolio.

Table 4-3 Electricity GHG emission factors (CO2-eq). Source: [37, 38, 40], Multiconsult

Scenario	Description	Emission factor [gCO2/kWh]
European (EU27 incl. UK and Norway) production mix average 2022- 2024	Location-based production mix with wide system boundary of EU countries, UK, and Norway	209.1
Norwegian physically delivered electricity 2024	Location-based production mix with narrow system boundary, including net export/ import only to neighbouring countries, and average annual emission factors	11.9
Norwegian residual mix 2024	Market-based residual mix with a European marketplace represents electricity not covered by Guarantees of Origin	534.8[10]
Swedish Energy Agency electricity mix	Location-based production mix with narrow system boundary, adjusted to include export/import	26
Swedish residual mix 2024	Market-based residual mix with a European marketplace, represents electricity not covered by Guarantees of Origin	85.5[10,11]

For the average production mix, the following calculations use the emission factor as an average from a baseline in 2024 (Table 4-3) and the expected lifetime for each type of vehicle, following the trajectory of the European production mix in Figure 4-3. For instance, for passenger vehicles with an expected lifetime of 19 years, the emission factor will then be an average of the emission factor presented in Figure 4-3 in the period from 2025-2043. The projected trajectories for declining CO2 emissions related to power production for European (EU27 incl. UK and Norway), from 2025 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 other mixes.

The energy consumption of EVs is very much 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, we are using the average for all currently available EV models in the EV Database, 0.189 kWh/km. [41] For the energy consumption of light-duty vehicles, 0.26 kWh/km is applied. [42]

4.3.3 Emission Factors - Scope 2

In Table 4-4, indirect emission factors based on the scenario European (EU27 incl. UK and Norway) from Table 4-3 are presented as both emissions per kilometre and per passenger-kilometre/tonne-kilometre. The factors below are used to calculate indirect emissions for the portfolio based on this scenario. Similar factors have been computed based on the Norwegian and Swedish factors in Table 4-3 and used in the corresponding calculations of impact.

[10] Note that the individual residual mixes, as published by AIB, are based on country-specific production data, consumption data, exchange with third countries, GO tracking data and CO2 emissions per fuel type and may vary from year to year. Residual mixes were 598.6 gCO2/kWh for NO and 68.2 gCO2/kWh for SE in 2023. See [38] for calculation details.
[11] Lower than Norwegian residual mix due to larger share of electricity usage covered by Guarantees of Origin.

Table 4-4 Annual average electricity consumption GHG emission factors (CO2-eq) per distance for all electric vehicles, based on ***EU + UK + NO*** *average power production mix 2022-2024.*

	Indirect emissions electric passenger vehicle	Indirect emissions electric light-duty vehicle
Emissions per passenger-km, indirect emissions from power production	14.4 gCO2/pkm	35.5 gCO2/pkm
Emissions per km, indirect emissions from power production	24.4 gCO2/km	23.7 gCO2/km

The equivalent indirect electricity emission factors for fossil-fuelled passenger cars and light-duty vehicles are 0 gCO2/km, as these vehicles do not consume electricity. There are indirect emissions related to fossil fuel as well, but scope 3 emissions 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 Portfolio Analysis and Impact Assessment

5.1 Eligible Vehicles

The 135,616 eligible vehicles in DNB's YE-2025 portfolio are estimated to drive approximately 1.1 billion km per year.[12] Expected yearly mileage has been calculated based on statistics (see section 4.2.1). The available data from the bank includes the current number of contracts and related portfolio volume. Table 5-1 through Table 5-3 show the number of eligible vehicles and corresponding calculated mileage for vehicles in Sweden, and in Norway and Denmark, and in total, respectively.

*Table 5-1 Number of eligible vehicles and estimated yearly mileage **Swedish vehicles**.*

	No. of vehicles	Sum km/yr	Sum passenger-km/yr
Passenger vehicles	31,257	262 mill.	446 mill.
Light-duty vehicles	151	1.4 mill.	2.1 mill.
Sum Swedish portfolio	**31,408**	**263 mill.**	**448 mill.**

*Table 5-2 Number of eligible vehicles and estimated yearly mileage **Norwegian** (94%) **and Danish vehicles**.*

	No. of vehicles	Sum km/yr	Sum passenger-km/yr
Passenger vehicles	103,955	873 mill.	1,484 mill.
Light-duty vehicles	253	2.6 mill.	3.8 mill.
Sum Norwegian and Danish portfolio	**104,208**	**876 mill.**	**1,488 mill.**

*Table 5-3 Total number of eligible vehicles and estimated yearly mileage in total for **Nordic countries**.*

	No. of vehicles	Sum km/yr	Sum passenger-km/yr
Passenger vehicles	135,212	1,135 mill.	1,930 mill.
Light-duty vehicles	404	4 mill.	5.9 mill.
Sum entire Nordic portfolio	**135,616**	**1,139 mill.**	**1,936 mill.**

5.2 Avoided Emissions for Eligible Vehicles

The reduction in emissions due to electric vehicles replacing fossil-fuel vehicles is calculated as the sum of direct and indirect emissions.

Direct emissions are calculated by multiplying the distance travelled per year [km] by the vehicles in the portfolio and the specific emission factors [gCO2/km] in Table 4-1 and Table 4-2.

Indirect emissions are calculated by multiplying the distance travelled [km] by the vehicles in the portfolio in a year and the specific emission factors [gCO2/km] in Table 4-4 and equivalents for the other emission factors in Table 4-3 (see section 4.3.3). Note that the indirect emissions are only calculated for EVs and not for fossil-fuelled vehicles.

Table 5-4 to Table 5-6 summarises the lower CO2 emissions for the eligible assets in the portfolio in an average year of the vehicles' lifetime, presented as reductions in direct emissions and indirect emissions compared to the baseline of fossil fuelled vehicles. Table 5-4 present results based on the European power production mix. Table 5-5 is based on Norwegian and Swedish electricity mixes, considering export/import, and Table 5-6 on Norwegian and Swedish residual mixes for 2024.

[12] Decrease in driven distance from YE-2024 portfolio due to changed composition of portfolio.

*Table 5-4 The portfolio's estimated impact on GHG emissions, indirect emissions based on the **European power production** mix 2022-2024.*

	Avoided emissions compared to baseline – Norway (incl. DK) [tonnes CO2-eq/year]	Avoided emissions compared to baseline – Sweden [tonnes CO2-eq/year]	Avoided emissions sum entire Nordic portfolio [tonnes CO2-eq/year]
Direct emissions only (Scope 1)	83,460	23,630	**107,090**
Indirect emissions only (Scope 2, EU prod. mix)	-21,430	-6,460	**-27,890**
Sum direct and indirect	**62,030**	**17,170**	**79,200**

*Table 5-5 The portfolio's estimated impact on GHG emissions, indirect emissions based on **Norwegian and Swedish electricity mixes,** considering export/import.*

	Avoided emissions compared to baseline – Norway (incl. DK)[13] [tonnes CO2-eq/year]	Avoided emissions compared to baseline – Sweden [tonnes CO2-eq/year]	Avoided emissions sum entire Nordic portfolio [tonnes CO2-eq/year]
Direct emissions only (Scope 1)	83,460	23,630	**107,090**
Indirect emissions only (Scope 2, NO phys. del. el. 2024 and SE el. mix)	-1,980	-1,310	**-3,290**
Sum direct and indirect	**81,480**	**22,320**	**103,800**

*Table 5-6 The portfolio's estimated impact on GHG emissions, indirect emissions based on **Norwegian and Swedish residual mixes** for 2024.*

	Avoided emissions compared to baseline – Norway (incl. DK) [tonnes CO2-eq/year]	Avoided emissions compared to baseline – Sweden [tonnes CO2-eq/year]	Avoided emissions sum entire Nordic portfolio [tonnes CO2-eq/year]
Direct emissions only (Scope 1)	83,460	23,630	**107,090**
Indirect emissions only (Scope 2, NO/SE residual mix 2024)	-89,060	-4,300	**-93,360**
Sum direct and indirect	**-5,600**	**19,330**	**13,730**

Note that the high residual mix for Norway leads to net negative NO+DK avoided emissions. The same is not found for Sweden, which has a large share of nuclear energy in the electricity usage not covered by Guarantees of Origin. A residual mix calculated for the Nordic countries is 465 gCO2/kWh for 2024 [43], which in sum would give avoided emissions of 6,360 tonnes CO2-eq/year for the entire Nordic portfolio.

The reduction in Scope 1 direct emissions for the entire Nordic portfolio above corresponds to 44.8 million litres of gasoline saved per year.

[13] Applying the Danish grid emission factor (73.8 gCO2e/kWh; Energistyrelsen 2024) to the Danish share of the portfolio in place of the Norwegian factor increases indirect emissions for Danish vehicles from 130 to 810 tCO2/year. Total indirect emissions for the combined NO+DK portfolio rise from -1,980 to -2,660 tCO2/year (+34%), reducing net reported GHG impact by 680 tCO2/year, or 0.8% of the total. The Norwegian assumption is therefore considered immaterial at portfolio level.

In Table 5-7 below, the sums of direct and indirect avoided emissions for the whole Nordic portfolio are shown based on all indirect emission grid factors mentioned in Table 4-3. Direct emissions are the same for all mixes; only indirect emissions are dependent on the choice of electricity factor. 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.

Table 5-7 Sum of direct emissions and indirect emissions (CO2-eq) for the Nordic portfolio. Based on the European average power production mix, NO/SE electricity mixes considering export/import and NO/SE residual mixes.

	Indirect emission factor electricity[14] [gCO2/kWh]	Avoided emissions sum entire Nordic portfolio [tonnes CO2/year]
Sum direct and indirect European mix 2022-2024	209.1[15]	79,200
Sum direct and indirect NO physically delivered el. 2024 and SE electricity mix	NO: 11.9 SE: 26	103,800
Sum direct and indirect NO/SE residual mixes 2024	NO: 534.8 SE: 85.5	13,730

[14] Used to calculate emissions per driven distance as shown in section 4.3.3, which is then used in emission calculation.
[15] Projected towards net zero and averaged over vehicle lifetime.

6 References

[1] Climate Bonds Intitiative Low Carbon Transport Technical Working Group, “Low Carbon Transport,” Climate Bonds Initiative, 11 2020. [Online]. Available: https://www.climatebonds.net/standard/transport. [Accessed 07 02 2025].

[2] EU, “Climate Delegated Act,” 06 2020. [Online]. Available: https://ec.europa.eu/sustainable-finance-taxonomy/sectors/sector/6/view. [Accessed 07 02 2025].

[3] OECD, “OECD Data Explorer - Transport - Annual passenger transport,” International Transport Forum, [Online]. Available: https://data-explorer.oecd.org/?lc=en. [Accessed 12 05 2026].

[4] Eurostat, “Population on 1 January by age and sex,” Eurostat, 08 05 2026. [Online]. Available: https://ec.europa.eu/eurostat/databrowser/view/demo_pjan/default/table?lang=en. [Accessed 12 05 2026].

[5] Statistics Norway, “12578: Road traffic volumes, by main type of vehicle, type of fuel and age of vehicle 2005-2024,” 04 02 2025. [Online]. Available: https://www.ssb.no/en/statbank/table/12578. [Accessed 08 02 2026].

[6] Transport Analysis, “Vehicle mileage for Swedish-Registered Vehicles 1999-2024,” 10 04 2025. [Online]. Available: https://www.trafa.se/en/road-traffic/driving-distances-with-swedish-registered-vehicles/. [Accessed 13 02 2026].

[7] A. Myhr, “Hur har personbilsflottan förändrats från 80-talet fram till nu?,” Trafikanalys, 14 05 2025. [Online]. Available: https://www.trafa.se/vagtrafik/personbilsflottan-13678/. [Accessed 11 03 2026].

[8] Statistics Norway, “05522: Vehicles scrapped for refund (C) 1999 - 2025,” 06 03 2026. [Online]. Available: https://www.ssb.no/en/statbank/table/05522. [Accessed 11 03 2026].

[9] Samferdselsdepartementet, “Meld. St. 14 (2023–2024) Nasjonal transportplan 2025–2036,” 22 03 2024. [Online]. Available: https://www.regjeringen.no/no/dokumenter/meld.-st.-14-20232024/id3030714/. [Accessed 09 02 2026].

[10] Opplysningsrådet for veitrafikken, “Bilsalget,” 2026. [Online]. Available: https://ofv.no/bilsalget/bilsalget-i-desember-2025. [Accessed 09 02 2026].

[11] Finansdepartementet, “Foreslår nedtrapping av elbilsubsidier,” 15 10 2025. [Online]. Available: https://www.regjeringen.no/no/aktuelt/foreslar-nedtrapping-av-elbilsubsidier/id3124394/. [Accessed 10 02 2026].

[12] Statistics Norway, “07849: Registered vehicles, by year and type of fuel,” 06 03 2026. [Online]. Available: https://www.ssb.no/en/statbank/table/07849/. [Accessed 13 04 2026].

[13] Transport analysis, “Vehicle statistics,” 19 02 2026. [Online]. Available: https://www.trafa.se/en/road-traffic/vehicle-statistics/. [Accessed 11 03 2026].

[14] Swedish Climate Policy Council, “Klimapolitiska rådets rapport 2025,” Swedish Climate Policy Council, Stockholm, 2025.

[15] Klimat- och näringslivsdepartementet, “Det klimatpolitiska ramverket,” 12 06 2017. [Online]. Available: https://www.regeringen.se/artiklar/2017/06/det-klimatpolitiska-ramverket/.

[16] Transportstyrelsen, “Bonus - till bilar med låg klimatpåverkan,” 16 12 2024. [Online]. Available: https://www.transportstyrelsen.se/sv/vagtrafik/fordon/skatter-och-avgifter/berakna-din-preliminara-bonus/.

[17] Transportstyrelsen, “Klimatbonusen ändras vid årsskiftet,” 01 01 2023. [Online]. Available: https://www.transportstyrelsen.se/sv/om-oss/pressrum/nyhetsarkiv/2022/klimatbonusen-andras-vid-arsskiftet/.

[18] Swedish Climate Policy Council, “Klimapolitiska rådets rapport 2024,” Swedish Climate Policy Council, Stockholm, 2024.

[19] Regjeringskansliet, “Ny riktad elbilspremie med start i mars,” Klimat- och näringslivsdepartementet, 18 12 2025. [Online]. Available: https://www.regeringen.se/pressmeddelanden/2025/12/ny-riktad-elbilspremie-med-start-i-mars/. [Accessed 11 03 2026].

[20] Forskrift om begrensning i bruk av helse- og miljøfarlige kjemikalier og andre produkter (produktforskriften), “Kapittel 3. Omsetningskrav for biodrivstoff og bærekraftskriterier for biodrivstoff og flytende biobrensel,” 2026. [Online]. Available: https://lovdata.no/dokument/SF/forskrift/2004-06-01-922/KAPITTEL_5#KAPITTEL_5.

[21] Miljødirektoratet, "Framleis auka bruk av biodrivstoff i 2024," 01 07 2025. [Online]. Available: https://www.miljodirektoratet.no/aktuelt/nyheter/2025/juni/framleis-auka-bruk-av-biodrivstoff-i-2024/. [Accessed 10 02 2026].

[22] Skatteetaten, "Veibruksavgift på drivstoff," 2026. [Online]. Available: https://www.skatteetaten.no/satser/veibruksavgift/?year=2025#rateShowYear. [Accessed 10 02 2026].

[23] Regjeringskansliet, "Skattebefrielse för rena och höginblandade biodrivmedel till och med 2026," Pressmeddelande från Finansdepartementet, 14 12 2022. [Online]. Available: https://www.regeringen.se/pressmeddelanden/2022/12/skattebefrielse-for-rena-och-hoginblandade-biodrivmedel-till-och-med-2026/. [Accessed 15 01 2023].

[24] Regjeringskansliet, "Ansökan om fortsatt skattebefrielse för rena och höginblandade flytande biodrivmedel," Finansdepartementet , 30 09 2025. [Online]. Available: https://www.regeringen.se/pressmeddelanden/2025/09/ansokan-om-fortsatt-skattebefrielse-for-rena-och-hoginblandade-flytande-biodrivmedel/. [Accessed 11 03 2026].

[25] Klimat- och näringslivsdepartementet RSE, "Lag (2017:1201) om reduktion av växthusgasutsläpp från vissa fossila drivmedel," 2025. [Online]. Available: https://www.riksdagen.se/sv/dokument-och-lagar/dokument/svensk-forfattningssamling/lag-20171201-om-reduktion-av-vaxthusgasutslapp_sfs-2017-1201/. [Accessed 21 02 2026].

[26] Energimyndigheten, "Drivmedelsrapport," 2024. [Online]. Available: https://app.powerbi.com/view?r=eyJrIjoiODhlN2IyNmUtMmQ4OC00MzFmLTlkZTEtMWNhZGNhZmFjNzkwIiwidCI6IjVjMTk0OGIzLWE5ODYtNDg1MC04M2YyLTQ2NTk 2NWMzNmNhMSIsImMiOjh9. [Accessed 13 02 2025].

[27] Sveriges Riksdag, "Utskott säger ja till sänkt reduktionsplikt för bensin och diesel," 13 11 2023. [Online]. Available: https://www.riksdagen.se/sv/aktuellt/aktuelltnotiser/2023/nov/23/utskott-sager-ja-till-sankt-reduktionsplikt-for_cms7f419a62-c5fb-46e4-bd92-50109ac0cb75sv/. [Accessed 13 02 2025].

[28] H. Lindblom and M. Selin, "Vägtrafikens utsläpp 2024," Trafikverket, Stockholm, 2025.

[29] C. Moore, J. Leigh-Bell and H. Jackson, "Land Transport Criteria Version 2," Climate Bonds intitiative, London, 2020.

[30] Statistics Norway, "Mindre utslipp per kjørte kilometer," 15 02 2018. [Online]. Available: https://www.ssb.no/transport-og-reiseliv/artikler-og-publikasjoner/mindre-utslipp-per-kjorte-kilometer.

[31] Trafikanalys, "Transportarbete i Sverige – om metoderna för att beräkna transportarbete OM 2019:5," Trafikanalys, Stockholm, 2019.

[32] C. Moore, J. Leigh-Bell and H. Jackson, "Land Transport Criteria Version 2 - Development of Eligibility Criteria under the Climate Bonds Standard & Certification Scheme - Background Document," Climate Bonds Initiative, London, 2022.

[33] Opplysningsrådet for veitrafikken, "CO2-utslippet," 2026. [Online]. Available: https://ofv.no/CO2-utslippet/co2-utslippet. [Accessed 11 02 2026].

[34] Transportstyrelsen, "Statistik över koldioxidutsläpp 2025," 12 02 2026. [Online]. Available: https://www.transportstyrelsen.se/sv/om-oss/statistik-och-analys/statistik-inom-vagtrafik/statistik-over-koldioxidutslapp/. [Accessed 13 02 2026].

[35] Statistics Norway, "08307: Production, imports, exports and consumption of electric energy (GWh) 1950 - 2024," 30 05 2025. [Online]. Available: https://www.ssb.no/en/statbank/table/08307. [Accessed 15 06 2025].

[36] Statistics Sweden, "Electricity supply in Sweden by type of power plants. Year 1986 - 2024," 08 10 2025. [Online]. Available: https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__EN__EN0105__EN0105A/ElProdAr/. [Accessed 11 03 2026].

[37] Association of Issuing Bodies, "European Residual Mixes 2024," Association of Issuing Bodies, Brussels, 2025.

[38] Norwegian Water Resources and Energy Directorate, "Strømdeklarasjoner," 26 08 2025. [Online]. Available: https://www.nve.no/energi/energisystem/energibruk/stroemdeklarasjoner/. [Accessed 05 02 2026].

[39] Finance Norway, "Gudelines for calculating financed emissions," Finance Norway, Oslo, 2023.

[40] Swedish Energy Agency, "Drivmedel 2022," Swedish Energy Agency, Stockholm, 2023.

[41] EV Database, "Energy consumption of full electric vehicles," [Online]. Available: https://ev-database.org/cheatsheet/energy-consumption-electric-car. [Accessed 21 02 2025].

[42] Trafikverket, "Handbok för vägtrafikens luftföroreningar," 2022. [Online]. Available: https://bransch.trafikverket.se/contentassets/5d86ee446e8a4628bd5aacc27cb213eb/emissionsfaktorer-vagtrafik-2022-2030-2045_v2.xlsx. [Accessed 21 02 2025].

[43] Energimarknadsinspektionen, "Residualmix," 13 06 2025. [Online]. Available: https://ei.se/bransch/ursprungsmarkning-av-el/residualmix. [Accessed 13 02 2026].

[44] Statistics Norway, Eurostat, "Køyrer nest mest i Europa," 01 08 2017. [Online]. Available: https://www.ssb.no/transport-og-reiseliv/artikler-og-publikasjoner/koyrer-nest-mest-i-europa. [Accessed 15 02 2020].