



Dutch State Treasury Agency
Ministry of Finance

State of the Netherlands

Green bond report 2024

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Dike reinforcement Marken. Photo: Frank Janssens

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1. Introduction

I am pleased to present the Dutch State Treasury Agency's 2024 Green Bond Report. Green Bonds are bonds of which the proceeds will be allocated to green, or climate-related, expenditures and investments. Last year, the Dutch State reopened the Green DSL 3.25% 15 January 2044 (the "Green DSL 2044") twice, raising a total volume of €4.3 billion. This brings our total outstanding amount in Green Bonds, comprised of the Green DSL 2040 and the Green DSL 2044, to €25 billion. In this publication, the Dutch State Treasury Agency reports on how we have allocated the funds raised in the 2024 tap auctions to the different categories in our framework.

As before, we have divided the funds across different categories, ranging from flood risk protection to stimulation of renewable energy production through tax breaks on solar panels and subsidies for wind energy. Hence, our framework reflects the two complementary parts of climate policy, this being both mitigating climate change and adapting to a changing climate.

In this report, we have again updated certain methods to determine how these expenses have contributed to avoided CO₂ emissions. Moreover, we have further improved the accessibility of our Green Bond Report by making the allocation and impact table publicly available on our website. Finally, [Moody's](#) has reviewed this Green Bond Report, providing a Second Party Opinion. They have reached a positive conclusion.

The DSTA remains committed to improve our reporting wherever possible. Therefore, we would welcome your feedback or suggestions for future Green Bond reporting.



Saskia van Dun
Agent
Dutch State Treasury Agency

2. Allocation Report

The government allocates funds from its green issuance to expenditures of the Central Government Budget that contribute to climate change mitigation and adaptation. The DSTA seeks to have a diversified allocation of funds. Therefore, in the current Green Bond Framework, there are four categories of Eligible Green Expenditures that can be used for the allocation of Green Bond proceeds: i) renewable energy, ii) energy efficiency, iii) clean transportation and iv) climate change adaptation & sustainable water management. The 2023 revision of the Green Bond Framework has also been used to assess to what extent eligible expenditures are aligned with the EU Taxonomy. All expenses in the updated framework adhere to the EU taxonomy for significant contribution criteria.¹ No subsequent amendments have been made to the 2023 Green Bond Framework.

The interdepartmental Green Bond Working Group annually allocates the proceeds of the green bonds to budget items. The DSTA proposes a list of potential Eligible Green Expenditures. The Working Group reviews and verifies whether these expenditures comply with the criteria and definition of Eligible Green Expenditures described in the Green Bond Framework. Subsequently, the Working Group approves the final selection of Eligible Green Expenditures. The interdepartmental Green Bond Working Group consists of representatives of the DSTA, the Ministry of Finance, the Ministry of Economic Affairs, the Ministry of Climate Policy and Green Growth and the Ministry of Infrastructure and Water Management.

Proceeds of Green DSL 2040 fully allocated as of 1 January 2024

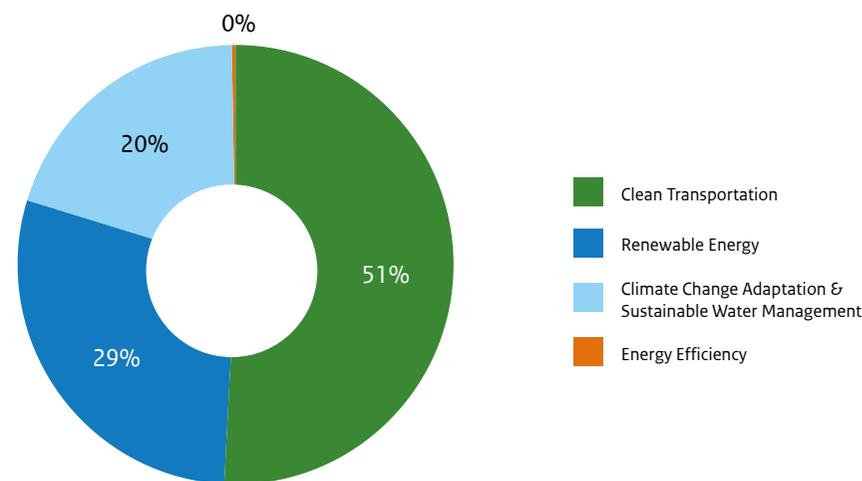
This Green Bond report is completely and exclusively related to the Green DSL 2044, as the Green DSL 2040 has not been reopened in 2024. Since our previous Green Bond Report, there have been no changes that warrant a revision to the allocation of expenses to the Green DSL 2040.

Allocation of proceeds Green DSL 2044, first issued in 2023

On 27 February and 9 July 2024, the DSTA tapped the Green DSL 3.25% 15 January 2044 for a total amount of €4,271,000,000. According to the 2023 Green Bond Framework, up to 50% of the proceeds may be allocated to eligible expenditures in the financial year preceding the issuance. At least 50% of the proceeds will be allocated to expenditures in the year of issuance or future years. Applying these principles, at least €2,135,500,000 needs to be allocated to expenditures in 2024, or future years.

Figure 1 and Table 1 show how the proceeds have been allocated to the expenditures.

Figure 1: allocation of proceeds



¹ [Onafhankelijke beoordeling \(Second Party Opinion\) - Green Bond Framework - 2023 | Publicatie | DSTA.nl](#)

Table 1: total and allocated expenditures per category 2023 and 2024

Annual expenditures category (x € 1 mln)*		2023			2024			2023 & 2024
Category	Description	Expenses yet to be allocated from Green Bond report 2023	Total remaining expenses 2023	Expenses allocated in this green bond report 2023	Total expenses 2024	Expenses allocated in this green bond report 2024	Expenses yet to be allocated	Total expenses allocated in this green bond report
		(1)	(2)	(3)	(4)	(5)	(4)-(5)	(3)+(5)
Renewable Energy 	Stimulation of Sustainable Energy Production (SDE, SDE+, SDE++)	-8	-8	0	312	117	195	117
	Offshore wind energy	0	0	0	152	57	95	57
	Onshore wind energy	-8	-8	0	27	10	17	10
	Solar energy	0	0	0	133	50	83	50
	Tax breaks for energy generated by private solar panels	0	854	374		0	0	374
	Capital Injection TenneT - Transmission System Operator	0	1602	701		0	0	701
	Hydrogen Backbone**	56	56	19	35	13	22	32
	IPCEI Hy2Use	0	0	0	0	0	0	0
Energy Efficiency  	Subsidy on heat networks (WarmtelinQ)	9	9	4	0	0	0	4
Clean Transportation  	Development, maintenance and management of fully electrified railway infrastructure, excluding dedicated freight railway infrastructure****	890	890	390	2661	998	1663	1388
	Management, maintenance and replacement	841	841	368	2388	896	1492	1264
	Construction	140	140	61	258	97	161	158
	Integrated contract forms/PPC	89	89	39	223	83	139	122
	Receipts	-179	-179	-79	-208	-78	-130	-156
	Regional Infrastructure and accessibility Projects	234	234	103	785	294	490	397
	Mega Projects Traffic and Transportation	174	174	76	467	175	292	252
	Tax breaks electric and low emissions vehicles*****	0	318	139		0	0	139
Climate Change Adaptation & Sustainable Water Management  	Delta Fund	753	753	330	1435	538	897	868
	Flood risk management Investments	183	183	80	416	156	260	236
	Freshwater supply investments	56	56	24	70	26	44	51
	Management, maintenance and replacement	165	165	72	327	123	205	195
	Experimentation	139	139	61	135	50	84	111
	Network related costs and other expenditures	179	179	78	378	142	237	220
	Water quality investments	33	33	14	108	40	67	55
Total expenditures		2108	4882	2136	5694	2136	3559	4271

- * Due to rounding it could occur that the sum of the categories is slightly different than the total.
- ** In last year's report, the DSTA accidentally accounted for a receipt of €37 million, which actually should have been an expenditure. This year's report corrects this mistake in the 2023 (allocated) expenses.
- *** The DSTA rail-related expenses within the Clean Transportation category have been adjusted by 7.1% to reflect the partial non-electric railway network. This adjustment was not included in the 'Total Expenses 2023' column of the [Green Bond Report 2023](#), resulting in a discrepancy between the final figures for 2023 and the comparative 2023 figures presented in the Green Bonds Report 2024. The difference amounts to € 258 million.
- **** Expenses for maintenance, management and replacement of railway infrastructure are distributed by the Ministry of Infrastructure and Water Management as a subsidy to ProRail. Dedicated freight rail related expenditures are excluded.
- ***** Only 50% of the tax relief for hybrid cars is included, thereby assuming that hybrid cars drive electrically half of the time.

I. Renewable energy

Stimulation of Sustainable Energy Production

To stimulate renewable energy generation, the State of the Netherlands has introduced several successive subsidy schemes over the last few years. This includes the Stimulation Sustainable Energy Production and Climate Transition (SDE, Stimuleren Duurzame Energie Productie en Klimaattransitie) and its successors SDE+ and SDE++. SDE subsidizes techniques for renewable energy generation. The proceeds of green bonds for the SDE scheme are allocated to onshore and offshore wind energy and solar energy. The SDE schemes compensate the producer for the difference between the cost of generation and the market price for a period of 12 to 15 years (i.e. a subsidy focused on operational expenditures). As a result, project developers and investors enjoy more certainty about the profitability of these projects.

Capital Injection TenneT - Transmission System Operator

TenneT is a 100% state owned company that is responsible for the high voltage electricity grid in the Netherlands and for a large part of the high voltage electricity grid in Germany. TenneT has an important role in the transition to a more sustainable energy system by providing the infrastructure for connecting renewable energy to the electricity network, especially connecting the wind farms in the North Sea, and for transporting electricity from renewable energy sources via its onshore network. TenneT has received a €1.6 billion capital contribution from the Dutch State in 2023. This capital injection was provided to support TenneT's capital structure and its investments in the energy transition. TenneT has invested €2.9 billion in the Netherlands in 2023 which was 100% taxonomy eligible. This facilitates the trajectory to a climate neutral energy system while keeping a high security of supply.

Tax relief for sustainable energy production by households

The Dutch government stimulates solar energy via the net metering scheme in the energy tax. Households and small businesses can offset excess self-produced electricity and return it to the electricity grid. They can net this excess when they require additional electricity. This results in a tax benefit for households and small businesses, and a tax revenue loss for the government. For example: a household consumes 3,500 kWh electricity and feeds 1,000 kWh back to the energy supplier. With the net metering scheme, this household only has to pay energy tax on 2,500 kWh electricity (3,500 – 1,000). This financial benefit makes generating solar energy more attractive for households.

Hydrogen backbone

Gasunie is developing the national transport network for hydrogen on behalf of the government. The network will connect five large industrial clusters and storage facilities. Moreover, the Dutch network is connected to the Belgian and German networks. Construction for this network started in Rotterdam.

II. Energy Efficiency

Subsidy on heat networks (WarmtelinQ)

WarmtelinQ is an underground main transport pipeline for warm water to heat houses in the province of Zuid-Holland. The water is warmed by using residual heat from the industry in the Port of Rotterdam. It is also possible to use heat from other sources, provided that they meet the technical requirements set by WarmtelinQ. The project contributes to the overall goal to become climate neutral in 2050.

III. Clean transportation

Development, maintenance and management of fully electrified railway infrastructure

Rail is the largest expenditure category of the green bond. The largest Dutch rail transporter – de Nederlandse Spoorwegen – uses 100% green energy. 92.9% of the railroad is electrified. The screening criteria for clean transportation only has electrified track ‘in scope’. To this end, the allocation discounts rail related expenditures with 7.1%. In addition, railroad manager ProRail, regional partners, and contractors focus on minimising the carbon footprint of maintenance and construction (see section 5).

ProRail operates under commission from the Ministry of Infrastructure and Water Management. Through the management concession, ProRail receives a subsidy from the Ministry’s Mobility Fund for track management, maintenance and replacement. Expenditures intended for freight traffic have not been accounted for in the allocation of the green bond.

Tax breaks electric and low emissions vehicles

To achieve the climate targets for road transport, it is the Dutch government’s ambition for all new cars to be emission free by 2030 at the latest. A comprehensive package of measures has been agreed on in the Dutch climate agreement (2019) to accelerate the selling of new and second-hand zero-emission cars. One of these measures is a temporary exemption in the motor vehicle tax. Zero-emission vehicles will remain exempt from the national component of the motor vehicle tax up to 2025. Plug-in hybrid electric vehicles have a 50% reduction in tax rate up to 2025. For households, the exemption in the motor vehicle tax is an important incentive to buy cars with lower emissions: a recent survey has shown that 18% of the households driving an electric car would switch to a fossil fuel car, if the exemption would be abolished.² Looking at the whole lifecycle, the carbon emission of an electric car is about 60 percent lower compared to a fossil fuel powered car.³

² <https://open.overheid.nl/documenten/ronl-163faaf2c477258569a30a2eb1aec2f1e740f2ea/pdf>

³ <https://www.rvo.nl/onderwerpen/elektrisch-rijden/milieu-en-elektrisch-vervoer>

IV. Climate change adaptation and sustainable water management

2024 joins 2023 as the hottest year in the Netherlands, and worldwide since measurements started in 1901. It was the third wettest year on record for the Netherlands as well since measurements started in 1906. There have been 13 days of heavy precipitation, compared to an average of 5 and 9 days per year in the 20th- and 21st century respectively. The latest KNMI’24 Climate Scenarios⁴ confirm the trend for both the Netherlands and the Caribbean Netherlands that average temperature is rising, and drought and extreme precipitation are occurring more often. Sea levels also continue to rise. This has consequences for water safety, freshwater availability, water quality and the supply of drinking water.

As a low-lying delta, the Netherlands is vulnerable to flooding. Approximately 8 million people are protected by a primary flood defence. Due to climate change, sea levels are rising, extreme discharges are occurring more often, and the risk of flooding is increasing. Despite this, the Netherlands is the best protected delta in the world. This is possible because the government is continuously working together with water boards and Rijkswaterstaat on water safety goals. The Climate Scenarios also show the necessity of taking measures to improve freshwater availability. Water users must prepare for more frequent periods of water shortages.

⁴ The KNMI is the Royal Netherlands Meteorological Institute.

3. Impact Report

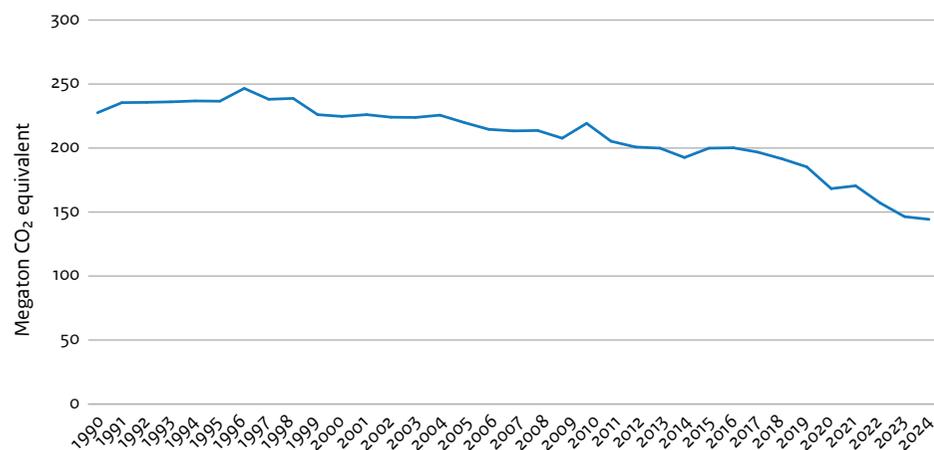
I. Summary of impact

Impact of the Dutch State Green Bond

By linking proceeds from the issuance of the green bond to green expenditures, the DSTA makes it possible to report about the impact of these proceeds. Moreover, the eligible proceeds are used for EU taxonomy aligned activities, and they align with the principles of Do No Significant Harm.⁵ Where feasible and available, specific impact results are presented in relation to green expenditures. There is no detailed prescribed methodology for these impact assessments, and the methodologies need to consider national differences and local or temporal circumstances (like emission factors evolving over time with changes in the composition of the national electricity mix). In the following sections explanations are given to how impact has been determined.

Since the 2022 green bond report, social and adverse indicators have been included. An example of a social indicator is the number of people protected by flood defence works. An example of an adverse indicator is the number of times the maximum allowed noise level is exceeded near railways.

Figure 2: Greenhouse gas emissions in accordance with the IPCC guidelines (Mton CO₂ equivalent)



⁵ Only for the category “Tax relief and subsidies for electric and plug-in hybrid electric vehicles” we have not been able to determine whether the DNSH principle of pollution prevention and control has been respected due to data limitations.

Greenhouse gas emissions in the Netherlands declined with 1.6% in 2024 compared to 2023.⁶ Electricity and mobility sectors emitted less, while the emissions from industry increased. Emissions in 2024 were 37% lower than in 1990. The production of renewable electricity in 2024 amounted to approximately half (61 billion kWh) of the total electricity production in the Netherlands, which is 10% more than in 2023.⁷ Growth in the renewable electricity production can mainly be attributed to wind (a 13% increase compared to 2023 amounting to 33 billion kWh) and solar (an 11% increase compared to 2023 amounting to 22 billion kWh).

The impact table on the next page provides an overview of the impact of the eligible expenditures categories in the green bond framework.

⁶ [CBS - Decrease in greenhouse gas emissions levelled off in 2024](#)

⁷ [Half of electricity is produced from renewable sources | CBS](#)

Table 2: impact and results per expenditure category 2023 and 2024

Category	Category description	2023			2024		
		Contribution to avoided CO ₂	Result indicators	Impact metric other	Contribution to avoided CO ₂	Result indicators	Impact metric other
 Renewable Energy	Stimulation of Sustainable Energy Production (SDE, SDE+, SDE++) Tax breaks for energy generated by private solar panels	2.5 Mton	10.6 GWP	4.9 TWh	SDE: 2.4 Mton SDE+: 12.3 Mton SDE++: 0.5 Mton Total: 15.2 Mton	SDE: 9,507 projects; 1,729 MW subsidized SDE+: 20,058 project; 15,514 MW subsidized SDE++: 1,561 projects; 788 MW subsidized. Total: 31,126 project; 18,031 MW subsidized	SDE: 18 PJ sustainable production; 5,113 GWh SDE+: 94 PJ sustainable production; 26,217 GWh SDE++: 3.75 PJ sustainable production; 1,041 GWh Total: 117 PJ sustainable production; 32,370 GWh
  Clean Transportation	Development, maintenance and management of fully electrified railway infrastructure, excluding dedicated freight railway infrastructure Tax breaks for electric cars	0.07 Mton 0.9 Mton	No completed railwayproject 7,002 km maintained railway invested in 37 projects	15.5 bln. Passenger-kilometers on the railways in 2023	0.18 Mton	1 completed railway project 6,990 km maintained railway invested in 40 projects	16.1 bln. Passenger-kilometers on the railways in 2024
  Climate Change Adaptation & Sustainable Water Management	Delta Fund: <ul style="list-style-type: none"> Flood risk management investments Freshwater supply investments Management, maintenance, and replacement Experimentation Network related costs and other expenditures Water quality investments 	Not applicable	In 2023 there is 219 kilometers of safe dykes, based on the newest norms. This is 14.6% of all dykes to be improved. The target is 100% safe dykes in 2050 In 2023 138 flood defence works meet the new standards. This is 36.3% of all works identified to be improved. The target is 100% safe flood defence works in 2050	The target value is a mortality risk of 1:100,000 per year, in 2050. The standards for dykes and weirs have been adjusted accordingly. The availability of storm surge barriers in 2023 was 100%. The target value is 100%	Not applicable	In 2024 there is 224 kilometers of safe dykes, based on the newest norms. This is 14.1% of all dykes to be improved. The target is 100% safe dykes in 2050 In 2024 138 flood defence works meet the new standards. This is 34.5% of all works identified to be improved. The target is 100% safe flood defence works in 2050	The target value is a mortality risk of 1:100,000 per year, in 2050. The standards for dykes and weirs have been adjusted accordingly. The availability of storm surge barriers in 2024 was 83%. The target value is 100%

Social indicators

Clean transportation – access to rail mobility

Proximity to a railway station is an important factor in the choice between public transportation or transportation by car. On average, Dutch citizens lived 5.3 kilometres from the nearest railway station and 10.8 kilometres from a main hub station in 2023.⁸ With investments in railway infrastructure the access to rail mobility is preserved and, where possible, improved.

Flood defences – people protected by flood defence work

The goal for 2050 is for every citizen living behind a primary flood defence in the Netherlands, currently around 9 million people, to have at most a 1 in 100,000 chance of dying due to flooding. As of 2020, for 80% of citizens living behind a primary flood defence this is the case. The target is to increase this percentage to 82% in 2029.⁹

Grid availability - percentage downtime of main grid

For 2023, the total availability of the main high voltage electricity grid was 99.99988%. This compares favourably with a target availability of 99.99962%.¹⁰

Adverse indicators

Renewable energy – Use of Space by Offshore wind parks

The Dutch section of the North Sea amounts to 57,800 square kilometres.¹¹ In 2023, the area covered by offshore wind parks is 1.65%, amounting to 954 square kilometres. This is expected to increase to 4.5% in 2030.

Clean transportation – Noise pollution of railways

ProRail monitors, through reference points along the Dutch railway infrastructure, the noise pollution generated by rail traffic. In 2023, there were 56,893 reference points. At 158 reference points (0.3% of the total) the noise level exceeded the maximum allowed limit. This is lower than in 2022, when this number was equal to 198 reference points.¹²

⁸ StatLine - Nabijheid voorzieningen; afstand locatie, regionale cijfers (cbs.nl)

⁹ Delta program 2025

¹⁰ Tennet Integrated Annual Report 2024

¹¹ Hoeveel ruimte gebruikt wind op zee? - Wind op zee

¹² Nalevingsverslag geluidproductieplafonds spoorwegen 2023 | Rapport | Rijksoverheid.nl

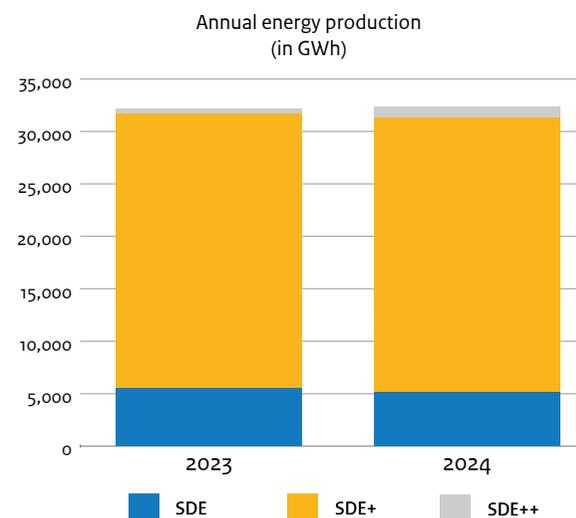
II. Details per expenditure category and key limitations

Renewable energy

Stimulation of Sustainable Energy Production

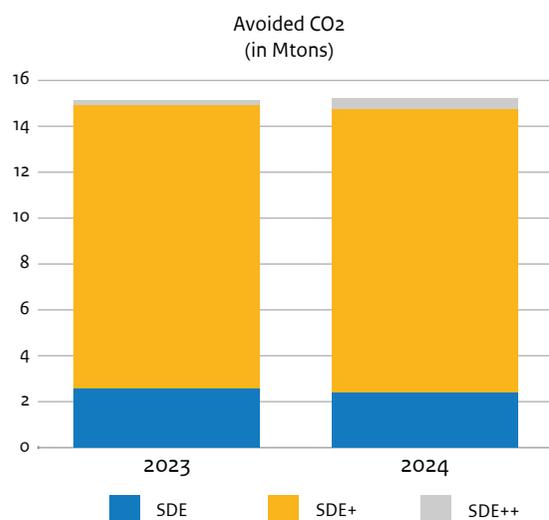
Renewable energy generated by projects financed with the SDE, SDE+ and SDE++ schemes is measured on the basis of actual meter readings (see Figure 3). There has been a slight increase from 2023 to 2024 of 0.6% to 32,371 million kWh. To determine the amount of avoided CO₂ emissions of projects subsidized by the SDE scheme, the generated electricity is multiplied by the emission factor of Statistics Netherlands (CBS).¹³ A variety of parties is involved in realizing projects subsidised with the SDE scheme, such as equity financiers, debt financiers, the government, local and regional authorities, and project developers. The SDE subsidy scheme provides a contribution to these avoided CO₂ emissions.

Figure 3: Electricity produced by SDE subsidized projects



¹³ We apply the emission factor of 2023 of the “Referentieparkmethode”, see [link](#). The 2023 factor is also applied to the 2024 production as the 2024 factor is not yet available.

Figure 4: Avoided CO₂ emissions with electricity produced by SDE subsidized projects



Capital Injection TenneT - Transmission System Operator

In the green bond framework, the share of renewable energy transported through the grid has been indicated as a result indicator for investments in the Transmission System Operator. In 2024, approximately half of total electricity production was produced by renewable sources.¹⁴

Tax relief for sustainable energy production by households

In the past years, the net metering scheme was one of the main drivers of the increase of solar energy production. The total installed power of small solar panel power systems increased to 10.6 MwP in 2023.¹⁵ The net metering scheme also leads to less energy consumption from the regular grid and therefore, as electricity production is partly fossil fuel based, to a reduction of CO₂ emissions. The total netting of small consumers was 4.9 TWh for 2022.¹⁶ Based on the growth in the number of small-scale solar projects, the expected growth in 2023 is 26% to 6.1 TWh.¹⁷

¹⁴ Source: Statistics Netherlands, [Half of electricity is produced from renewable sources | CBS](#)

¹⁵ [Monitor Zon-PV 2024 | Rapport | Rijksoverheid.nl](#)

¹⁶ See [link](#).

¹⁷ See [link](#).

This does not imply the same growth in netting, as households also use generated power themselves and total netting is restricted to their own overall energy consumption. Based on the 2021-2022 figures, it is estimated that the netting share of the total return will decrease from 83% to 80%. This means that the expected amount of netting in 2023 is: $6.1 \cdot 0.8 = 4.9$ TWh. This corresponds to 2.5 Mtons avoided CO₂ emissions.¹⁸ It should be noted that the avoided CO₂ emissions cannot be solely ascribed to the net metering scheme. Other factors such as energy prices and subsidies will most likely have a much larger effect. The calculation does not take emissions in the supply chain of solar panels into account.

Energy Efficiency

Sustainable heat via WarmtelinQ

For WarmtelinQ, impact indicators have been defined¹⁹ in the green bond framework, i.e. number of houses connected, annual energy savings in MWh and avoided CO₂. As the heat network is not yet operational, it is not yet possible to report on these dimensions. On the website of WarmtelinQ, progress per track can be followed.²⁰

Clean transportation

Development, maintenance and management of fully electrified railway infrastructure

By investing in management, maintenance and renewal of track (for passenger transport), the Netherlands has a mode of transport that emits very little CO₂. In 2024, the Ministry of Infrastructure and Water Management completed one rail project and it invested in 40 rail projects, an increase from 37 rail projects in 2023.²¹ Railway manager ProRail managed and maintained 6,990 kilometres of track in 2024.²² The number of kilometres decreases over time because of eliminating tracks.

In order to determine the avoided CO₂ as a consequence of investments and maintenance of rail infrastructure, the DSTA, commissioned a report in 2020 from Significance, an independent research agency focusing on mobility and transport.²³ In 2024 there were 16.1 billion passenger kilometres on the rail, which is assumed to disappear completely if there would be no investments

¹⁸ See table in 5.1.4 in [link](#) for the avoided CO₂ per TWh.

¹⁹ Appendix 1 [Green Bond Framework 2023](#)

²⁰ See [link](#).

²¹ See [link](#).

²² See [link](#).

²³ See appendix III of [Green bond report 2019](#).

in rail.²⁴ In 2024 the passenger kilometres were 13% lower than in 2018.²⁵ Hence, avoided emissions are reduced by 13%, assuming other factors remain constant. Applying Significance's methodology yields an estimation of 0.18 Mton of avoided CO₂ for 2024 due to investments and maintenance.

Tax breaks electric and low emissions vehicles

The growth of zero-emission and plug-in hybrid electric cars and vans leads to a reduction of CO₂ emission, because these cars are a substitute for fossil cars and vans. The mean CO₂ emission of fossil cars is about 160 g/km, of plug-in-electric cars about 150 g/km and of fossil fuel vans about 220 g/km.²⁶ The average mileage per private car or van is about 14,000 km per year and per business van about 22,000 km per year.²⁷ With these assumptions, the avoided CO₂ emission of all zero-emission and plug-in electric cars is 0.9 Mton in 2023. It should be noted that the calculated avoided CO₂ emission cannot be solely ascribed to the exemption in the motor vehicle tax. Other measures in the Dutch climate agreement and EU measures such as CO₂ emission targets also have an effect on reducing the CO₂ emission of cars and vans.

Climate change adaptation and sustainable water management

Over the past years, the Delta Plan on Spatial Adaptation has created awareness of climate change adaptation. Significant steps have been taken to accelerate and intensify the approach to climate change adaptation. In addition, the Ministry of Infrastructure and Water Management finished three projects in 2024 and invested in twenty-six projects in 2024, such as the Reeve sluice (see section 4) which completed the *Room for the River* programme of the Netherlands.

In total, 224 of the 1590 kilometres of dykes that need to be improved were declared safe in 2024, which means they meet the flood protection standard for 2050. In 2024, 138 out of 400 flood defence works have been restored to a safe level.²⁸ In addition to water safety projects, the Dutch government invests in fresh water supply and water quality projects. The government works together with several layers of government and other stakeholders to protect Dutch citizens against floods and droughts, and ensuring the supply of fresh water. The Netherlands must comply with EU directives such as the 'Water framework directive' and 'Natura 2000'. Projects ensuring water quality and safety have high standards in restoring or maintaining the ecological value. The government is committed to achieving the objectives of the water framework directive within its means.

²⁴ ProRail has indicated that without expenditure on management, maintenance and replacement of the track, it is no longer responsible to allow trains to run.

²⁵ See NS annual reports [2022](#) and [2024](#).

²⁶ See [link](#). The average for fossil fueled cars is the unweighted average for petrol and diesel including hybrid vehicles. Therefore, the amount for fossil fueled cars of 160 g/km might be a slight underestimation, so the contribution to the avoided CO₂ emission might also be slightly underestimated.

²⁷ See [link](#) and [link](#). The average is taken over the average mileage for cars and vans from 1 to 6 years old.

²⁸ See [link](#).

4. Reeve sluice completes Room for the River programme

Reeve sluice improves water safety and nature

As a capstone project of the IJsseldelta second phase of the Room for the River-programme (Ruimte voor de Rivier), the old Roggebot sluice was dismantled and replaced by the Reeve sluice. By building the sluice, water levels in Zwolle were reduced by 41 centimetres. This sluice, together with a new branch river, the Reevediep, significantly improves water safety in the IJssel river delta. In the event of high water levels, water will flow into the new branch from the IJssel river. By closing the Reevesluice, water spills into the Dronter lake and IJssel lake, reducing water levels of the river IJssel. Besides the improvement to water safety, the sluice also facilitates fish migration with a special passage and includes a hiking road and a crossing for canoeists to improve regional recreational opportunities. Construction of the Reevediep has also led to more than 300 hectares of new delta nature.

End of remarkable programme

This project marks the end of the Room for the River-programme, which was set up in 2006 by Rijkswaterstaat, provinces, water boards, and municipalities as a result of severe flooding in 1993 and 1995. These floods caused a shift in thinking about water management and water safety, leading to the concept of 'Room for the River'. This programme has improved water safety by moving dykes further inland, digging new branch rivers and by lowering flood plains. Room for the River also led to more recreational opportunities and biodiversity. A key component in the success of the Room for the River-programme has been the close cooperation between public and private partners, as well as the local population.



Photo: John Gundlach

5. Amstel tram connects Amsterdam region

Connecting Amsterdam region

In the summer of 2024, the conversion of the Amstelveen metro line into a high-quality tram connection was completed. The connection was named Amsteltram. The final piece of the tram line between Amsterdam Zuid and Amstelveen Westwijk is the extension of the tram to Uithoorn. This connects Uithoorn to the regional, national and international rail network. Road safety will also improve due to the construction of a number of grade-separated intersections.

Participation and circular material use

Part of the tram track has a top layer of grass instead of ballast. Maintenance paths along the track are made of olivine: a type of stone that absorbs CO₂. Together with residents, involved parties studied integration of green elements to ensure cleaner air and cooling, improving water draining and less use of materials. The renewed Amstelveen line will have a completely new tram stabling yard in the Legmeerpolder. In addition to parking areas for rolling stock, there are locations for minor maintenance of the trams as well. The parking spaces are accessible to staff via level crossing paths made of recycled rubber car tyres.



6. Energietuin Assen-Zuid

Energietuin Assen-Zuid

The Sustainable Energy Production and Climate Transition Incentive Scheme (SDE++) provides subsidies to companies and non-profit organizations that generate renewable energy or reduce CO₂ emissions on a large scale. SDE++ is an important contributor to the realization of the energy and climate transition in a cost effective manner. SDE++ supports a wide variety of projects within the Netherlands. One of these projects is “Energietuin Assen-Zuid”, located in the city of Assen.

The Energietuin Assen-Zuid is one of the first of its kind in the Netherlands. Within an Energietuin – Energy Garden – renewable energy is generated. Additionally, the concept aims to provide added value to its surroundings, through careful and participative incorporation within the landscape.

The Energietuin Assen-Zuid is a large-scale solar energy project, containing 37,000 photovoltaic solar panels on 19 hectares. The project generates approximately 21MW of renewable energy and provides energy to over 6,000 households. A guiding principle in the development of the project is ‘3x local’. The project aims to generate (energy) locally, use locally, and provide local economic benefits. Next to large-scale renewable energy production, the project also benefits its surrounding area through supporting biodiversity, nature and allowing for recreation and education.

The Energietuin Assen-Zuid was developed by the municipality of Assen, in collaboration with both a local (AsserEnergie) and national (Windunie) energy cooperative, and Natuur en Milieufederatie Drenthe.



7. Other topics regarding green bonds

I. Market developments of green bonds

According to S&P, the global issuance of green bonds increased in 2024 to \$622 billion, up from \$575 billion in 2023.²⁹ With the reopening of the Green DSL 2044 in 2024, the Netherlands has €24.9 billion of green bonds outstanding spread over two lines as of July 2024. This amounts to 6.64% of the outstanding Dutch State Loans (as at the end of January 2025).

II. Dutch green bonds in the future

After the initial issuance of the Green DSL 2044 for an amount of €4.98 billion in October 2023, the DSTA reopened this bond twice in 2024. The green DSL 2044 has an outstanding volume of €9.25 billion at the close of 2024. The DSTA is committed to increase the outstanding amount of each of the green bonds to a minimum of €10 billion in the coming years, in line with regular DSLs with a longer maturity.

III. The EU green bond standard

Regulation (EU) 2023/2631 of the European Parliament and of the Council on European Green Bonds and optional disclosures for bonds marketed as environmentally sustainable and for sustainability-linked bonds (also known as the EU Green Bond Standard Regulation, EU GBS) was formally adopted and subsequently published at the end of 2023. This new regulation opens the possibility of issuers coming to the market with a so-called EU GBS bond. The DSTA follows market developments regarding the issuance of such EU GBS bonds. Any potential future issuance of an EU GBS aligned bond will be announced in future Outlooks, depending on feasibility, market conditions and specific circumstances.

²⁹ [S&P Global green issuance](#)

IV. Climate policies

The Principal Agreement and Policy Agenda of the new government state that the government will adhere to current, legally agreed upon climate agreements and wants to decrease harmful emissions, aiming for a 60% reduction in greenhouse gases (GHG).³⁰ However, the Netherlands Environmental Assessment Agency (Planbureau voor de Leefomgeving, PBL) reported that reaching the goal for reducing GHG by at least 55% in 2030 will be very unlikely.³¹ Under standing policy, the Netherlands is on course for a reduction in emissions of 44% to 52% in 2030 compared to 1990. In response to this conclusion, the cabinet has announced new measures on 25 April 2025.³² These new measures range from strengthening the energy grid, lowering energy taxes for industry to aid the affordability of the energy transition, continuation of the SDE++ subsidy scheme, and a temporary lowering of motor vehicle tax for electric cars, among other things.

In the general public opinion it is widely accepted that climate change needs to be combatted, and people are also more willing to live more sustainably. Three quarters of the Dutch people are concerned about climate change, and half think the government should take more measures to combat climate change.³³ 80% of Dutch people also recognize the importance of making lifestyle changes.³⁴ A testament to this willingness to live more sustainably is the ever increasing share of renewable energy. Currently, more than 17% of energy consumption is from renewable sources, an increase of 13% compared to 2022.³⁵

In addition to policy measures which reduce greenhouse gases, the Netherlands is also adapting itself to a changing climate. The Netherlands has a long standing tradition in defending itself against river and coastal flooding. Climate change makes these challenges ever more relevant. The new government explicitly stresses the importance of climate change adaptation in their proposals. The government is planning to update the 'Room for the River' programme (Ruimte voor de Rivieren³⁶) and recalibrate the High water protection programme (Hoogwaterbeschermingsprogramma³⁷).

³⁰ [Principal Agreement](#) and [Policy Agenda](#).

³¹ [Klimaat- en Energieverkenning 2024 \(pbl.nl\)](#)

³² <https://open.overheid.nl/documenten/48cfoeef-5b4f-4afe-aa59-fe066a20f5e0/file>

³³ <https://www.scp.nl/publicaties/publicaties/2024/03/27/sociale-en-culturele-ontwikkelingen-2024>

³⁴ <https://www.rijksoverheid.nl/documenten/rapporten/2024/02/12/publieksmonitor-klimaat-en-energie-2023-motivacion>

³⁵ <https://www.cbs.nl/en-gb/news/2024/23/energy-from-renewable-sources-rises-to-17-percent>

³⁶ [Ruimte voor de rivier](#)

³⁷ See [Home | Hoogwaterbeschermingsprogramma](#)

Annex I

Auditor's Report by the independent auditor

Independent auditor's report

To: The Agent of the Dutch State Treasury Agency

Our opinion

We have audited the Allocation report (chapter 2 of the Green Bond Report 2024 of the Dutch State Treasury Agency based in The Hague).

In our opinion the allocation report is prepared, in all material respects, in accordance with the principles as described in the Green Bond Framework of the Dutch State (version September 8th 2023), chapters 2.1, 2.2, 2.3 and 2.4.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the 'Our responsibilities for the audit of the allocation report' section of our report.

We are independent of the Dutch State Treasury Agency in accordance with the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics). We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of the basis of accounting and restriction on use and distribution

We draw attention to note on page 6 of the Green Bond Report 2024 of the Dutch State Treasury Agency based in The Hague, which describes the basis of accounting. The Green Bond Report 2024 of the Dutch State Treasury Agency based in The Hague is intended for the investors in de green bonds issued by the Dutch State Treasury Agency and is prepared to assist the Dutch State Treasury Agency to comply with the principles as described in the Green Bond Framework of the Dutch State (version September 8th 2023), chapters 2.1, 2.2, 2.3 and 2.4. As a result, the Allocation report may not be suitable for another purpose. Therefore, our auditor's report is intended solely for the Dutch State Treasury Agency and the investors in the green bonds issued by the Dutch State Treasury Agency and should not be distributed to or used by other parties than the Dutch State Treasury Agency and the investors in the green bonds issued by the Dutch State Treasury Agency. Our opinion is not modified in respect of this matter.

Other information

To the Allocation report other information has been added that consists of:

- 1. Introduction
- 3. Impact report
- 4. Reeve sluice completes Room for the River programme
- 5. Amstel tram connects Amsterdam region
- 6. Energietuin Assen-Zuid
- 7. Other topics regarding the green bond

Based on the following procedures performed, we conclude that the other information is consistent with the Allocation report and does not contain material misstatements.

We have read the other information. Based on our knowledge and understanding obtained through our audit or otherwise, we have considered whether the other information contains material misstatements.

By performing these procedures, we comply with the requirements of the Dutch Standard 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the Allocation report.

The Agent of the Dutch State Treasury Agency is responsible for the preparation of the other information in accordance with the principles as described in the Green Bond Framework of the Dutch State (version September 8th 2023), chapters 2.1, 2.2, 2.3 and 2.4.

Responsibilities of the Agent of the Dutch State Treasury Agency for the Allocation report.

The Agent of the Dutch State Treasury Agency is responsible for the preparation of the Allocation report in accordance with the Green Bond Framework of the Dutch State (version September 8th 2023), chapter 2.1, 2.2, 2.3 and 2.4. Furthermore, the Agent of the Dutch State Treasury Agency is responsible for such internal control as she determines is necessary to enable the preparation of the Allocation report that is free from material misstatement, whether due to fraud or error.

Our responsibilities for the audit of the Allocation report.

Our objective is to plan and perform the audit engagement in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the Allocation report. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

For a more detailed description of our responsibilities, we refer to https://www.nba.nl/ENG_algemeen_01

The Hague, May 26th 2025

Central Government Audit Services





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PO Box 20201 | 2500 EE The Hague
The Netherlands

Email: DSTA@minfin.nl
www.dsta.nl