



Dutch State Treasury Agency
Ministry of Finance

State of the Netherlands

Green bond report

28 May 2020



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1. Introduction



The Dutch State Treasury Agency issued its inaugural green bond on 21 May 2019. By issuing the green bond, the Netherlands aims to further enhance and support the establishment of a robust green capital market. Following the successful issuance, I am now proud to present the first combined allocation and impact report of the Dutch Green Bond.

Firstly, the DSTA is accountable through this document for the allocation of the use of proceeds raised in 2019 towards eligible green expenditures as identified in the Green Bond Framework. The allocation has been verified by the independent auditor of the Dutch State (ADR) and Sustainalytics has verified conformity of the expenditures with the Climate Bonds Standard. The findings of both the ADR and Sustainalytics have been added as Annexes to this report.

Subsequently, the report focuses on the environmental impact of the relevant green expenditures. The avoided carbon emissions as a result of investments in railway infrastructure has been calculated on the basis of a methodology developed by an independent research agency with a focus on mobility and transportation. This study has also been added as an Annex to this report.

The final section of the report discusses the recent developments of the Dutch Climate Agreement, development of the green bond market in general and the performance of our green bond.

The DSTA hopes you enjoy this reading and is – as always – open to receive any feedback on the report.

Elvira Eurlings
Agent of the DSTA



A handwritten signature in blue ink, appearing to read 'Eurlings', with a stylized flourish at the end.

2. Allocation report



The issuance of green bonds is followed by the evaluation and selection of eligible green expenditures. This falls under the responsibility of the interdepartmental Green Bond Working Group, in which the Dutch State Treasury Agency (DSTA) of the Ministry of Finance, other relevant departments within the Ministry of Finance, the Ministry of Economic Affairs and Climate and the Ministry of Infrastructure and Water Management are represented. The interdepartmental Green Bond Working Group bases its selection on eligible green expenditures proposed by the DSTA. This Working Group assesses whether the inclusion of expenditures are possible, it checks whether expenditures meet the criteria and definition of eligible green expenditures in the Green Bond Framework, and approves the final selection of eligible green expenditures.

The Green Bond Framework distinguishes four expenditure categories for which the green bond proceeds can be used: Renewable Energy, Energy Efficiency, Clean Transportation, and Climate Change Adaptation & Sustainable Water Management. The Green Bond Framework likewise contains a list of the main articles in the National Budget that comply with these four expenditure categories.

The eligible green expenditures may include expenditures of the financial year in which the green bond is issued, the financial year immediately preceding it and future financial years. Hence, the DSTA has committed itself to allocate at least 50% of the net green bond proceeds to expenditure in the financial year in which the green bond was issued or future financial years.

During the Dutch Direct Auction (DDA) of 21 May 2019, the Dutch State issued green bonds to the value of EUR 5,985 million. The expenditure recorded for 2018 and 2019 specified in the Green Bond Framework as main expenditure of the aforementioned categories, collectively amounts to EUR 6,885 million.

As proposed by the DSTA, the interdepartmental Green Bond Working Group has decided to allocate the 2019 green bond proceeds to the budget items explicitly mentioned in Table 1 of the Green Bond Framework, for expenditures that were realised in 2018 and 2019. It was also decided to allocate 50% of the proceeds for expenditures realised in 2018 and 50% for expenditure realised in 2019. The eligible expenditures thus determined are significantly higher than the issuances of green bonds in 2019 (EUR 6,885 million worth of eligible expenditures vs. EUR 5,985 million worth of issuances). This means that the unallocated amount for the green bond is 0 euro. For the eventual allocation, the interdepartmental Green Bond Working Group has decided to allocate all eligible expenditures for 100% to the green bond, with the exception of expenditures on railway infrastructure (Infrastructure Fund, Article 13). 73,7% of the eligible expenditures on railway infrastructure over 2018 was taken into account and 80,2% over 2019. Since railway expenditures are the biggest and the DSTA wants to have a diversified portfolio of allocations, the choice was made to apply this selection to the expenditure item for railways. The relevant receipts on the articles by which the selected expenditures on the articles have been financed besides using the green bond have been taken into account. The table below sets out clearly how the interdepartmental Green Bond Working Group allocated the funds to the relevant government expenditures. At the same time, the nature of the expenditures is explained in detail for each expenditure category.

The percentage of allocation is the percentage of the green bonds' proceeds allocated to a category of expenditures in relation to the total eligible green government expenditures (all eligible expenditures in 2018 and 2019 were selected with the exception of railway infrastructure).

Annual expenditures category (x € 1 mln)		Allocation table green bond									
Category	Description	2018				2019					
		Total expenses (in million €)	Expenses allocated to green bond (in million €)	Percentage of allocation	Type green expenditure	Total expenses (in million €)	Expenses allocated to green bond (in million €)	Percentage of allocation	Type green expenditure	Total	Percentage of total
 Renewable Energy	Stimulation of Sustainable Energy Production (SDE)	528	528	100.0%	Subsidy	495	495	100.0%	Subsidy	1,023	17.1%
	Offshore wind energy	364	364	100.0%		348	348	100.0%		712	11.9%
	Onshore wind energy	151	151	100.0%		134	134	100.0%		285	4.8%
	Solar energy	13	13	100.0%		13	13	100.0%		26	0.4%
 Energy Efficiency	Energy savings in the rental housing sector	106	106	100.0%	Subsidy	134	134	100.0%	Subsidy	240	4.0%
 Clean Transportation	Maintenance and management of railway infrastructure, development of railway infrastructure for passenger rail	2,016	1,485	73.7%	73,8% operational expenditures* and	1,870	1,500	80.2%	76,7% operational expenditures* and	2,985	49.9%
	Management, maintenance and replacement	1,514	1115	73.7%	26,2% direct investment	1,458	1,170	80.2%	23,3% direct investment	2,285	38.2%
	Construction	399	294	73.7%		302	242	80.2%		536	9.0%
	Integrated contract forms/PPC	142	104	73.7%		144	116	80.2%		220	3.7%
	Interest and redemptions	10	7	73.7%		10	8	80.2%		15	0.3%
	Receipts	-49	-36	73.7%		-44	-35	80.2%		-71	-1.2%
 Climate Change Adaptation & Sustainable Water Management	Delta Fund	873	873	100.0%	59,0% operational expenditures and	863	863	100.0%	59,2% operational expenditures and	1,737	29.0%
	Flood risk management Investments	307	307	100.0%	41,0% direct investment	304	304	100.0%	40,8% direct investment	611	10.2%
	Freshwater supply investments	11	11	100.0%		0	0	100.0%		11	0.2%
	Management, maintenance and replacement	208	208	100.0%		195	195	100.0%		403	6.7%
	Experimentation	20	20	100.0%		21	21	100.0%		41	0.7%
	Network related costs and other expenditures	308	308	100.0%		316	316	100.0%		624	10.4%
	Water quality investments	20	20	100.0%		28	28	100.0%		48	0.8%
Total expenditures		3,523	2,992	84.9%		3,362	2,993	89.0%		5,985	100.0%

* The expenses for maintenance, management and replacement of railway infrastructure are distributed by the Ministry of Infrastructure and Water Management as a subsidy to ProRail.

** Due to rounding in the table above it could occur that the sum of the categories is slightly different than the total.

I. Renewable energy

To stimulate renewable energy generation, over the last few years the Dutch State has introduced several successive subsidy schemes: Environmental Quality of Electricity Production (MEP), Stimulation of Sustainable Energy Production (SDE), SDE+ and SDE++. These schemes provide long-term economic security for operators of renewable energy generation plants. This will stimulate the generation of renewable energy.

Of these subsidy schemes, the SDE scheme has been selected as an eligible expenditure. In 2018 and 2019, the Environmental Quality of Electricity Production (MEP) expenditure was very modest in size, while the Surcharge on Sustainable Energy (ODE) is a source of funding for the SDE+ and SDE++ schemes. This means the latter expenditures fall outside the definition of eligible expenditures.

SDE expenditures relate to a series of techniques for the generation of renewable energy. For allocation of the green bond proceeds to SDE expenditures, only expenditures relating to subsidies for onshore wind energy, offshore wind energy, and solar energy have been selected. The SDE scheme compensates additional costs incurred by a producer in the generation of renewable electricity for a period of 12 to 15 years. The SDE scheme is therefore an operating subsidy which will compensate the unprofitable part of renewable electricity generation in order to encourage these projects. The annual subsidy amount decreases as the electricity price increases (after all, it becomes more profitable to generate renewable electricity). These are renewable energy projects which are now operational, but for which an annual subsidy has been granted for a period of 12 to 15 years. As a result, project developers and investors have gained greater certainty about the profitability of a project, enabling them to operate their energy generation plant in a responsible manner.

When the SDE scheme was introduced, it was one of the most important instruments by which the State encouraged the energy transition. Many of the SDE features are still present in the SDE+ scheme and will be present in the SDE++ scheme.



II. Energy efficiency

For energy savings in the social rental sector an amount of EUR 400 million has been made available through the Energy Performance incentive scheme for the rental sector (STEP), which entered into force on 1 July 2014. Of this, EUR 5 million is earmarked for implementation costs and EUR 395 million for the programme. Through the STEP scheme, housing corporations and property owners receive subsidies for improving the energy efficiency of existing housing through floor or wall insulation, high-efficiency glazing, more efficient central heating systems and other measures.

The deadline for applying for this subsidy expired on 31 December 2018. The government entered into commitments for the entire subsidy budget and has granted over 4,000 applications, which will make improvement of sustainability possible for about 110,000 homes. The subsidies are paid out two years after they have been granted based on the achieved improvement in the energy performance of the relevant housing. In 2018, payout of the subsidies commenced and a total of EUR 105.8 million was spent, with which almost 30,000 housing units have been sustainably improved. In 2019, another EUR 134 million was spent on the improved sustainability of about 45,000 rental housing units.

III. Clean transportation

The Dutch railway system safely, sustainably, cost-effectively and space-effectively transports large flows of passengers between cities. In 2018, there were 21 billion passenger kilometres. The largest rail transportation operator in the Netherlands – NS – operates on 100% renewable energy, whereas 91% of the main track has been electrified. Furthermore, steps have been taken by ProRail, the network infrastructure manager, to reduce the carbon footprint while the tracks are being maintained and constructed. ProRail carries out its activities on behalf of the Ministry of Infrastructure and Water Management. For the management, maintenance and

replacement of the railways, ProRail receives subsidy using the management concession from the Infrastructure Fund of the Ministry of Infrastructure and Water Management. ProRail also receives funds from the Infrastructure Fund for the construction of State infrastructure projects conducted by ProRail on the railways. Allocation of proceeds from the green bond for railway infrastructure expenditures, does not include expenditure specifically intended for goods transportation.

IV. Climate Change Adaptation & Sustainable Water Management

In 2018, the Netherlands faced extreme weather conditions: prolonged drought, heat and heavy showers. The national heat record dating back to 1944 was broken in the summer of 2019. Research simultaneously showed that future sea levels may rise faster than was assumed in the delta scenarios. The World Economic Forum (WEF) also found that climate change is the biggest threat to the global economy. It is therefore of vital importance that the Netherlands continues to prepare itself well for the consequences of climate change, with a good protection against high water, plenty of freshwater and a climate-resistant and water-robust design.

Since 2010, the Netherlands has been working on common goals in the Delta Programme in conjunction with various public authorities and organisations. Rather than waiting for new flood disasters to strike, the Netherlands is ensuring that we keep ahead of any disasters, major damage and problems. Expenditures in this category are expenditures from the Delta Fund to ensure that high-water protection, freshwater supply and spatial planning are climate-proof and that water safety is guaranteed. For example, the identified weak links in the high-water protection system are systemically addressed and improved to meet the threat level that is foreseen for 2050.

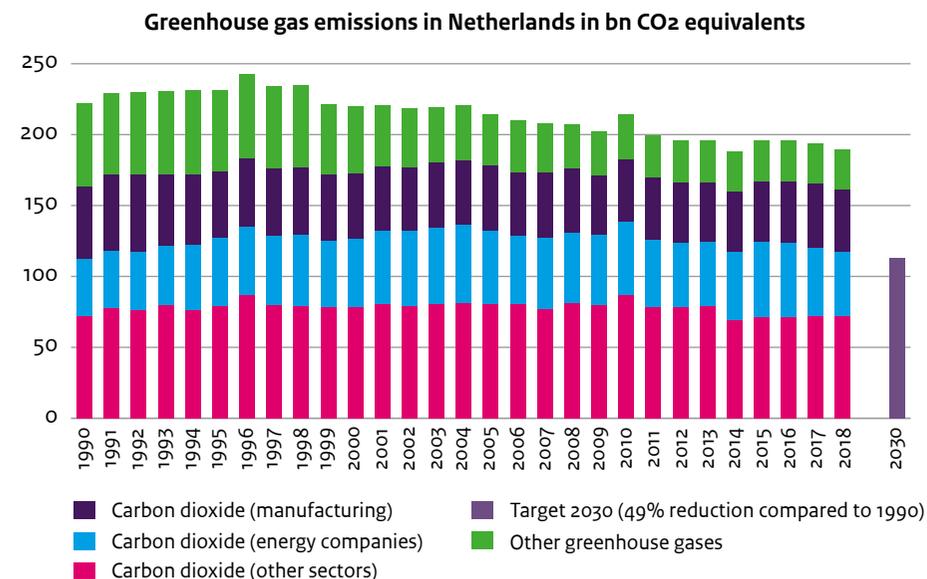
3. Impact report



The DSTA committed itself in the Green Bond Framework to publish the first impact report in the year after the first green bond was issued, explaining the positive environmental impact of the eligible expenditures. The DSTA's approach is that the reporting is based as far as possible on existing public reports on the results and impact of the eligible green expenditures.

Impact indicators for the Netherlands

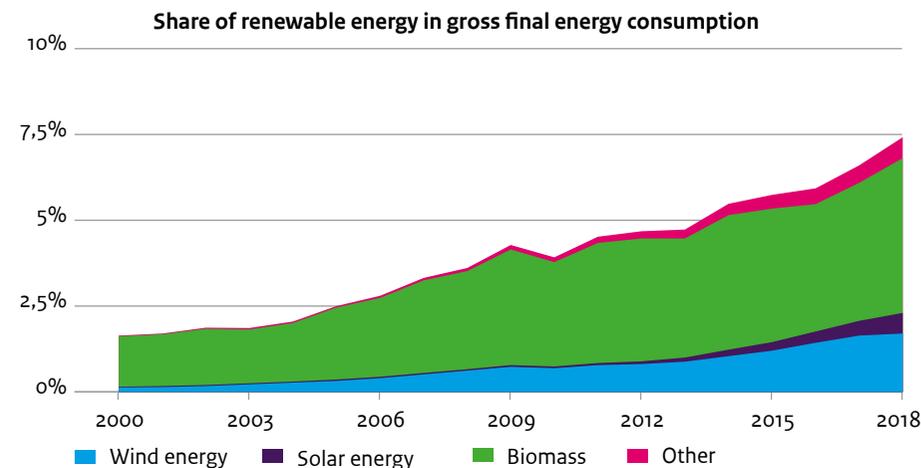
The introduction of this chapter initially discusses impact indicators that apply to the Netherlands and are related to climate change. Then, where feasible and available, specific results are given in relation to the eligible green expenditures of the green bond allocations. The emphasis here is on the projections of avoided carbon emissions for each expenditure category. Finally, chapters 4 and 5 provide an in-depth examination of case studies of projects that have been implemented.



Source: Statistics Netherlands, National Institute for Public Health and Environmental Protection (RIVM)/Emissions Registration

The above graph shows that greenhouse gas emissions in the Netherlands were decreased by 5.1 Mton CO₂ equivalents in 2018, 2.7% lower in 2018 than in 2017. Emissions in 2018 were 15.1% lower than in 1990. The objective in the coalition agreement is to reduce greenhouse gas emissions by 49% by 2030 in comparison to 1990. The objective for 2020 in comparison to 1990 amounts to 25% less greenhouse gas emissions. The decrease between 1990 and 2019 largely takes place for other greenhouse gases: emissions of methane (CH₄), nitrous oxide (N₂O) and fluorinated gases (F-gases) were 53% lower in 2019 than in 1990. In 2019, carbon dioxide emissions were 5% lower¹ than in 1990.

The following illustration shows that energy consumption from renewable sources in the Netherlands was 7.4% of the total energy consumption in 2018.² This figure was 6.6% in the previous year. The Netherlands Environmental Assessment Agency (PBL) expects that the proportion of renewable energy will increase to 11.4% by 2020 and 16.1% by 2023 as a result of acceleration in the rollout of renewable energy.³



Source: Statistics Netherlands

¹ Refer to <https://www.clo.nl/indicatoren/nl0165-broeikasgasemissies-in-nederland>

² Refer to <https://www.cbs.nl/nl-nl/nieuws/2019/22/aandeel-hernieuwbare-energie-naar-7-4-procent>

³ Refer to <https://zoek.officielebekendmakingen.nl/kst-32813-400.html>

Impact of the Dutch State's green bond

The table below shows an overview of the impact of the green bond in relation to eligible expenditures in 2018 and 2019. The avoided carbon emissions continuously relate to the joint impact of all expenditures and investments of all actors for the benefit of the underlying projects with the exception of the category clean transportation for which the avoided carbon emissions are related to the part financed by the green bond.

		Impact table green bond					
		2018			2019		
Category	Category description	Impact metric avoided CO ₂	Result indicators	Impact metric other	Impact metric avoided CO ₂	Result indicators	Impact metric other
 Renewable Energy	Stimulation of Sustainable Energy Production (SDE)	3.13 Mton	10,113 projects 1,734 MW subsidized production capacity	19.11 PJ production of renewable energy 5,308 mln kWh	3.22 Mton	10,088 projects 1,730 MW subsidised production capacity	19.63 PJ production of renewable energy 5,462 mln kWh
  Energy Efficiency	Energy savings in the rental housing sector	0.05 Mton	29,463 rental housing units 117,853 label steps	Annual energy saving: 0.82 PJ 228 GWh	0.08 Mton	45,289 rental housing units 181,156 label steps	Annual energy saving: 1,268 PJ 352 GWh
  Clean Transportation	Maintenance and management of railway infrastructure, development of railway infrastructure for passenger rail	0.18 Mton	2 realised railway projects 7,097 km railway track maintained investments in 47 projects	21 billion rail passenger km in 2018	0.18 Mton	3 realised railway projects 7,114 km railway track maintained investments in 47 projects	Number of rail passenger km in 2019 is not yet available and will be published in the next impact report.
  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 		In 2018 107 kilometers dyke was safe in view of the new standards. This is 12 % of all dykes. The target is 100% safe dykes in 2050. In 2018 24 engineering structures meet the new standards. This is 5 % of all engineering structures. The target is 100 % safe engineering structures in 2050.	In 2050 the probability of individual mortality as a result of flooding should not exceed 1:100,000 per annum. This goal has been translated into new standards for dykes and engineering structures. The availability of storm surge barriers was 40% in 2018. The target is 100% availability.		In 2019 129 kilometers dyke was safe in view of the new standards. This is 14 % of all dykes. The target is 100% safe dykes in 2050. In 2018 24 engineering structures meet the new standards. This is 5 % of all engineering structures. The target is 100 % safe engineering structures in 2050.	In 2050 the probability of individual mortality as a result of flooding should not exceed 1:100,000 per annum. This goal has been translated into new standards for dykes and engineering structures. The availability of storm surge barriers in 2019 was 83% in 2019. The target is 100% availability.

I. Renewable energy

In 2018, EUR 528 million worth of SDE subsidy was granted for selected categories within the SDE, for the categories solar energy, offshore wind energy and onshore wind energy. With this subsidy, 19.1 petajoules (5.3 million kilowatt hours) of renewable energy was generated. This is measured on the basis of actually measured meter readings and can therefore be determined with very high accuracy. This generated renewable energy is equal to 3.13 megatons (=3.13 billion kilo) of avoided carbon emissions.⁴

For 2019, EUR 495 million worth of SDE subsidy was granted for the categories solar energy, offshore wind energy and onshore wind energy. With this subsidy 19,6 petajoules (5,5 million kilowatt hours) of renewable energy was generated. This generated renewable energy is equal to 3.22 megatons (=3.22 billion kilo) of avoided carbon emissions.⁵

At the end of 2018, 10,113 projects received subsidy with a total capacity of 1,734 megawatts for the selected categories. Below is a summary table with a breakdown of the number of projects and their capacity per category.

2018	Number of projects	Subsidized installed capacity [in MW]	Actual annual energy production [in million kWh]
Offshore wind energy	3	719	2.898
Onshore wind energy	142	965	2.363
Solar energy	9,968	50	47
Total	10,113	1,734	5.308

At the end of 2019, 10,088 projects received subsidy with a total capacity of 1,730 megawatts for the selected categories. Below is a summary table with a breakdown of the number of projects and their capacity per category. The number of projects is slightly lower in 2019 than in

⁴ Statistics Netherlands, *Rendementen en CO₂-emissie van elektriciteitsproductie in Nederland* [Yields and carbon emissions of electricity generation in the Netherlands], update 2017

⁵ Statistics Netherlands, *Rendementen en CO₂-emissie van elektriciteitsproductie in Nederland* [Yields and carbon emissions of electricity generation in the Netherlands], update 2017

2018, because no new SDE subsidy decisions were issued. For new subsidy decisions, the SDE subsidy has been succeeded by SDE+. Furthermore, part of the current subsidy decisions were honoured in full in 2019.

2019	Number of projects	Subsidized installed capacity [in MW]	Actual annual energy production [in million kWh]
Offshore wind energy	3	719	2.931
Onshore wind energy	141	962	2.497
Solar energy	9,944	49	34
Total	10,088	1,730	5.462

As indicated in the chapter on Allocation, the SDE is an operating subsidy for the unprofitable part of renewable electricity generation. Aside from this subsidy, project developers and other financiers invest their capital to make renewable electricity generation possible. That part of the total financing of the underlying projects, is not available. However, the commitment of an operating subsidy for a period of 12 to 15 years was conditional to the underlying projects being implemented. It is for this reason that calculation of the avoided carbon emissions is based on the total renewable electricity generation of the underlying projects and the amount of carbon emissions that this has avoided.

II. Energy efficiency: STEP

For the STEP subsidy, the eventual amount of subsidy granted is based on the difference in energy performance prior to renovations and after improving sustainability of the rented housing. Energy performance is expressed in improvement in the energy label. To become eligible for the subsidy – depending on the initial situation – an improvement of at least 2 or 3 label steps is required. The average improvement per housing unit is 4 label steps. The support provided in 2018, has improved the energy performance of nearly 30,000 rented housing units. This means that the avoided carbon emissions for this group of housing units is 50 million kilotons per year. By 2019, energy performance had been improved in more than 45,000 rented housing units, resulting in about 80 million kilotons of avoided carbon emissions per year.

The avoided carbon emissions are based on an estimated energy saving per label step per housing unit⁶. This subsidy scheme is closed at the end of 2018. From 2019 onwards there are no new registrations. Because the subsidy is established and paid two years after granting this subsidy, there will be payments of subsidy the coming years.

The STEP scheme also requires that operators (housing corporations and property owners) must make investments that are supplementary to the subsidy, to achieve improvements in the energy performance of the rented housing concerned. The avoided carbon emissions shown, is the total amount of avoided carbon emissions achieved by means of improving efficiency.

STEP	2018	2019
Budget (in million €)	105.8	134.3
Number of houses	29,463	45,289
Number of label steps	117,853	181,156
Avoided CO ₂ in Mton	0.05	0.08

III. Clean transportation

In respect of punctuality and reliability in 2018, ProRail's results rank as one of the world's top 3 railway countries, with Japan and Switzerland. By investing every year in the management, maintenance, renewal and expansion of the railways (for passenger transportation), passengers in the Netherlands are provided with a mode of transport which is relatively low in carbon emissions. In 2018 and 2019, the Ministry of Infrastructure and Water Management has realised respectively 2 and 3 railway projects. In both years in 47 existing railway projects and programs has been invested, ranging from the programme 'Accessibility to stations' to completion of the

⁶ The amount of energy savings is based on a commonly used model of TNO/ECM to estimate the effects of finance constructions and policy measures. In this model (the variation tool) for a representative sample of the Dutch housing stock the characteristics of houses and households and the possibilities for energy savings have been measured. From the houses in the sample the energy use, the presence of energy saving measures and the energy label is known. The avoided CO₂ per label step has been calculated by translating the average actual savings in energy use to the comparable avoided CO₂.

'Utrecht Central Station' project. The network infrastructure manager ProRail has maintained in 2018 and 2019 respectively 7,097 kilometres and 7,114 kilometres of track.

The projection of the avoided carbon emissions as a result of investments and maintenance in railway infrastructure, required more effort than the categories of eligible expenditures mentioned above, since there was no existing data for railway infrastructure that was suitable for the Green Bond impact report. On commission for SNCF-Réseau in France, Carbone 4 developed a method whereby the avoided carbon emissions are calculated based on the expected change in passenger behaviour as a result of investments and maintenance in the railways. This method has also been used by the Spanish transport operator ADIF-Alta Velocidad. However, together with the Ministry of Infrastructure and Water Management and ProRail, the DSTA has concluded that this method cannot be applied to the situation in the Netherlands, because no 'degeneration curve' is available for the Netherlands that indicates how the infrastructure is deteriorating if, year after year, no investment would be done in management, maintenance and replacement of railway infrastructure.

The DSTA has therefore commissioned Significance, an independent research agency focused on mobility and transportation, to develop an alternative which assumes the change in passenger behaviour without the availability of railway infrastructure as the starting point. If no railway infrastructure would be available, the public would have to make other choices in terms of transport modality, the necessity to travel, and location for commuting from home to work and back, etc. These other choices can partially be estimated with the National Model System (LMS), although the LMS has not been developed for this purpose. The LMS is Rijkswaterstaat's forecasting model that predicts mobility in the Netherlands in the medium and long-term and is primarily used for capacity analysis, the balancing of various alternatives in projects and the consequences of other policy measures. Although the use of LMS for calculating avoided carbon emissions due to the situation with and without availability of railway infrastructure is a forecast, we believe that this gives the best estimate for the situation in the Netherlands for the avoided carbon emissions, as a result of investments and maintenance of railway infrastructure. For a more detailed explanation of the methodology chosen, refer to Annex III.

In 2018, there were 21 billion rail passenger kilometres, which would be completely eliminated⁷ if there were no investments in railway infrastructure. Every year, about EUR 6 billion is spent on the railway system, to cover the costs of railway infrastructure (State/ProRail) and the costs of rolling stock (NS/regional transport operator). Based on the aforementioned method, Significance calculated that the total volume of avoided carbon emissions in 2018 was about 776,000 tons. For expenditures allocated in terms of the green bond in relation to clean transportation, this amounts to 0.18 Mton of avoided carbon emissions per year for the years 2018 and 2019.

IV. Climate Change Adaptation & Sustainable Water Management

Some important concrete results were achieved in the field of water management in 2018 and 2019. For example, the new water safety standards for flood defences were legally established; preparations are already underway for the first dyke reinforcements based on these standards. In 2018, a new water-level decision was adopted for the IJsselmeer area, enabling flexible water-level management. This means that the freshwater supply is considerably more robust in a large part of the Netherlands. In addition, the Ministry of Infrastructure and Water Management has invested in seven projects, including strengthening the Lek dyke along the Lek River. In 2018, a total of 107 of the 927 kilometres of dykes were safe (12%). This means that they meet the water safety standard set for 2050.

It is expected that 12 flood defences of the 468 engineering structures will be reinforced to a safe level. In total, 24 flood defences⁸ (5%) have been reinforced since the introduction of the new High Water Protection Programme in 2016. The drought in 2018 made it clear that the measures taken in the Delta Plan on Freshwater Supply are effective.

In 2019, preparations for reinforcement of the Markermeer dykes started, the plan elaboration of Wolferen-Sprok was initiated and the innovative dyke improvement of Ringdijk Watergraafsmeer was completed. In total, 129 kilometres (14%) of the dykes were safe in 2019.⁹ In 2019 there was no increase in the number of safe engineering structures in comparison to 2018. However, in January 2019, the new standards for stress testing were published for waterlogging, heat stress, drought and the consequences of urban flooding. As part of the Delta Plan on Spatial Adaptation, the stress test mapped out the vulnerability to extreme weather for almost all municipalities.

⁷ There are several malfunctions (small and large) that need to be solved every day. If this does not happen, the entire country will soon be shut down, partly due to the 'interconnected' network in the Netherlands.

⁸ Refer to page 35 of Delta Programme 2020: <https://www.rijksoverheid.nl/onderwerpen/ruimtelijke-ordening-en-gebiedsontwikkeling/documenten/rapporten/2019/09/17/bijlage-2-deltaprogramma-2020>

⁹ Delta Programme 2020, section 3.2.1 figures 1 and 2: refer to <https://deltaprogramma2020.deltacommissaris.nl/3.html>

4. Case study: project Utrecht Central Station



A significant eligible expenditure under the Green Bond included investments in our railway infrastructure. A relevant project was the improvement of the railway infrastructure in Utrecht and its surroundings. The Dutch railway system's capacity was raised due to the introduction of high-frequency rail transportation on the busiest sections in the Randstad conurbation, and a good coherence with the transportation modes before and after rail transportation. Utrecht Central is the busiest railway station in the Netherlands. Where some 285,000 passengers now use Utrecht Central on a daily basis, this is expected to grow to 360,000 passengers per day in ten years' time.

Challenge

In Utrecht, railway infrastructure forms a barrier that divides the city into two. The area has a lot of unused and cluttered terrain. The railway station and the city and regional bus terminus are too small and too cluttered to accommodate the expected doubling in the number of passengers. The government has therefore designated this project as a New Key Project (Nieuw Sleutelproject, NSP).

Solution

The municipality has developed a new station area to improve the atmosphere and to change the spatial structure in such a way, to make the area a connecting link in the city. Hoog Catharijne Shopping Centre, Vredenburg Music Centre, the Jaarbeurs (Exhibition Centre) and the pattern of streets and city canals have been extensively improved. A new public transport terminal for trains, RandstadRail (rapid transit network), trams and buses was designed to double the number of passengers. In doing so, the regional projects for high quality public transport (HOV) from Utrecht Central Station to Leidsche Rijn and the eastern side of Utrecht, were taken into account.

Contribution to policy objective solution:

This investment contributes to improving travel convenience, allowing for sustainable growth in passenger transport and reducing door-to-door travel time.

(source: 2018 and 2019 overview of Multiannual programme for Infrastructure, Space and Transportation (MIRT))



5. Case study: Wonen Limburg



Improving sustainability of 4,000 rented housing units

In 2017, Wonen Limburg (housing corporation in Limburg) started improving the sustainability of 4,000 rented housing units over a period of four years. In this way, Wonen Limburg will achieve its goal of having an average B energy label for its entire property ownership of 26,000 housing units in 2020. By making use of the available subsidy – STEP – work can be carried out without any additional rental increase for the tenant. The savings in energy bills is therefore entirely for the benefit of the residents.

This enables Wonen Limburg not only to reduce the housing costs of 4,000 tenants, but it has also taken an enormous step in achieving its sustainability-related ambition.

(Source: https://www.wonenlimburg.nl/Home/Nieuws_Archief/Archief/2017:N8GwABEtTs-MnD_tolt-QPA/2017_april_juni/Verduurzaming_van_4_000_huurwoningen)



6. Green Bond other topics



I. Strong demand

The launch of the inaugural Green Bond, via a Dutch Direct Auction (DDA) on 21 May 2019, was widely regarded as successful. The book was closed with a total bid volume of more than EUR 21 billion. Due to the strong investor demand, DSTA ultimately issued EUR 5.98 billion, the upper end of the range of EUR 4 to 6 billion indicated prior to the auction.

The efforts of the DSTA to encourage green investors were also rewarded. In the weeks prior to the auction, the DSTA brought the green bond to the attention of investors, inter alia through an extended roadshow in Europe and the US. The DSTA committed itself to give priority in the allocation of green bonds to so-called green investors. Investors who were able to demonstrate sustainability credentials could indicate this through signing an investor letter. This would subsequently allow them to be registered as a green investor. Prior to the auction, 32 investors were registered as a green investor by the DSTA. At the cut-off spread, the green investors received a priority allocation and were allocated ten percentage points more vis à vis normal 'real money' investors. This resulted in an ultimate allocation of 82.5% of the bids from 'green real money accounts', 72.5% of the bids from 'real money accounts' and 18.5% of the bids from 'other accounts'. Of the total amount allocated 28.5% went to 'green real money accounts', 47.0% to 'real money accounts' and 24.5% to 'other' accounts.

II. Liquidity of the Green Bond

For the DSTA, sustaining liquidity in its bonds is one of its core values. Liquidity of the Green Bond, being the ease by which investors can buy and sell bonds without a notable price concession, has been very satisfactory. Initially there had been concerns that after the issuance the bond would mostly be bought and held by investors and, as a result, potentially impact the free float and hence its liquidity. Nonetheless, the DSTA is very pleased that market participants have confirmed that liquidity of the Green Bond is at least as good as other bonds in that part of the curve. As the DSTA is committed to sustain its liquidity, the green bond will be actively tapped by the DSTA (on the run), bringing its outstanding volume up to EUR 10 billion. This is subject to change in the overall funding need of the government. In the meantime, the DSTA will closely monitor – as with all other bonds – its liquidity while the green bond matures.

III. Development of the Green Bond Market

The Green Bond market has shown a strong growth in 2019. The Climate Bonds Initiative (CBI) calculates that the total global issuance has come to USD 257 billion in 2019, marking a 51% increase from its 2018 levels of around USD 167 billion. This means that the year-on-year growth has picked up again in 2019, where this was pretty moderate in 2018 (y-o-y growth of around 7%). In the Netherlands specifically, green bond issuance was around USD 15 billion according to the CBI. Aside from the Dutch State Treasury Agency, sixteen Dutch issuers were active in the green bond market.

The Dutch Authority for the Financial Markets (AFM) published a report on sustainable bonds¹⁰ in the Netherlands. AFM expects that the sustainable bond market will grow rapidly and indicates that issuers transition into more sustainable business models. An increasing number of companies might turn to financing investments through sustainable bonds.

IV. Reopening of the Green Bond

In the Outlook 2020 it was communicated that the DSTA will reopen the green bond for about € 2 bn. In light of the recent developments in the financing requirement it is possible that this amount of issuance will become higher. The DSTA will reopen the green bond at least once more. The first reopening took place at 14 January 2020. The DSTA has issued € 1.37 bn. in this reopening. The total outstanding amount of the green bond is currently € 7.36 bn.



¹⁰ <https://www.afm.nl/nl-nl/professionals/nieuws/2020/april/groei-obligatiemarkt>

V. Status of the Climate Agreement

In June 2019, the Dutch Climate Agreement was presented¹¹ by the Dutch government. This agreement, signed by relevant stakeholders in Dutch civil society, businesses and the government, outlines plans to reduce greenhouse gas emissions by 50% (base measure 1990) in 2030. The priority for the Dutch government is to achieve the reduction target in a way that is feasible and affordable for everyone. This means ensuring the lowest possible impact on the household budget and a fair distribution of burden between households and businesses, while maintaining a level playing field for the business sector. The climate agreement includes plans for the built environment (e.g. homes will gradually become more sustainable through a so-called neighbourhood approach), mobility (e.g. new cars emission free in 2030), industry (e.g. a reasonable and objective carbon levy in 2021), electricity (e.g. a switch from coal- and gas-based electricity to 70% electricity from renewable sources in 2030) and agriculture (e.g. measures for an integrated feed- and animal-specific approach to methane and ammonia for the dairy sector). Furthermore actions in cross-sectoral themes have been agreed upon, such as developing agreements regarding the labour market and training as a means to ensure a fair climate transition.

Moreover, a strong commitment from the financial sector is evidenced by their commitment to report on the climate impact of their investments and financing from 2020 onwards. In addition, action plans by financial institutions will be presented in 2022 that will contribute to the reduction of greenhouse gas emissions.

¹¹ <https://www.klimaataakkoord.nl/documenten/kamerstukken/2019/06/28/letter-house-of-representatives>

VI. Consequences of the European taxonomy for sustainable activities for the Green Bond of the Netherlands

In June 2019 the EU Technical Expert Group on Sustainable Finance (TEG) proposed an EU Green Bond Standard (EU-GBS) as well as the EU taxonomy. The EU-GBS can be regarded as a stricter version of the, now frequently used, ICMA Green Bond Principles (GBP). The main differences are that the EU-GBS require a use of proceeds format, disclosure of the proportion of proceeds used for refinancing, impact monitoring and reporting, external verification, and publication of the external verification, whereas the GBP only recommends these. In addition, the EU-GBS uses the EU taxonomy as a guideline to define which projects are green and requires verifiers to be accredited by the European Securities and Market Authority (ESMA). The EU taxonomy was agreed between the European Parliament and the Council in December 2019. The final report was released in March 2020. Subsequently, this agreement will have to be approved by the committee on environmental affairs and the economic affairs committee.

Based on the latest available information, we believe that the Green Bond of the Netherlands would be eligible in due time as a Green Bond under the EU taxonomy. The following text draws heavily on the information provided by the European Union in the Proposal for a regulation of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investments.¹²

¹² <https://data.consilium.europa.eu/doc/document/ST-5830-2020-ADD-1/en/pdf>

The Proposal for a regulation of the European Parliament and the Council¹³ reads as follows: “an economic activity shall be environmentally sustainable where that activity complies with all of the following criteria:

- a. the economic activity contributes substantially to one or more of the environmental objectives set out in Article 5 in accordance with Articles 6 to 11;
- b. the economic activity does not significantly harm any of the environmental objectives set out in Article 5 in accordance with Article 12;
- c. the economic activity is carried out in compliance with the minimum safeguards laid down in Article 13.

The text then continues to list the environmental objectives in Article 5, namely:

1. climate change mitigation;
2. climate change adaptation;
3. sustainable use and protection of water and marine resources;
4. transition to a circular economy;
5. pollution prevention and control;
6. protection and restoration of biodiversity and ecosystems.

The list of environmental objectives is also to be found in the TEG report on the EU taxonomy.¹⁴

It is our view that the Dutch Green Bond would contribute to objective (1) and (2) listed in Article 5. We are also of the opinion that the activities funded by the Dutch Green Bond cause no noteworthy harm to any of the objectives listed in Article 5.¹⁵

Renewable energy and clean transportation fit quite neatly in the EU taxonomy, but for expenditures on flood risk management the definitions in the EU taxonomy are yet to be defined. We also consider energy efficiency to fit in the EU taxonomy. For all categories, the DSTA will continue to monitor developments in the EU taxonomy and will report on specific categories should this become available.

In addition, Article 4 of the regulation stipulates that “Financial market participants offering financial products as environmentally sustainable investments, or as investments having similar characteristics, shall disclose information on how and to what extent the criteria for environmentally sustainable economic activities set out in Article 3 are used to determine the environmental sustainability of the investment.” In our view, the impact report that has been drafted by the DSTA in cooperation with the other relevant ministries, ensures compliance with Article 4 and shows investors how their investment in Dutch Green Bonds contributes to the objectives as set out in Article 5 in a meaningful and transparent way.

¹³ 2018/0178 (COD)

¹⁴ https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy_en.pdf

¹⁵ <https://data.consilium.europa.eu/doc/document/ST-5830-2020-ADD-1/en/pdf>

Appendix I

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 2019 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 march 15th 2019), 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 paragraphs 1 up to and including 3 of chapter 2 of the Green bond report 2019 of the Dutch State Treasury Agency based in The Hague, which describes the basis of accounting. The Green bond report 2019 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 march 15th 2019), 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 de 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:

- Introduction
- Impact report
- Case study: Project Utrecht Central Station
- Case study: Wonen Limburg
- Green Bond other topics

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 march 15th 2019), 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 march 15th 2019), 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 28th 2020

Auditdienst Rijk

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