



MINISTRY OF FINANCE

Kingdom of Denmark Green Bond Allocation Report

March 2023

2021



Kingdom of Denmark
Allocation Report
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Ministry of Finance
Christiansborg Slotsplads 1
1218 Copenhagen K
Denmark

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Name of bonds assigned by the issuer: DGB 0.00'2031 G

ISIN: DK0009924375

Annual period for allocation report to refer to: January 1 – December 31, 2021

Post-issuance review of allocation of proceeds by Deloitte Statsautoriseret Revisionspartnerselskab (Business registration no.: 33 96 35 56)

The Ministry of Finance is accountable through this document for the allocation of the use of proceeds raised in 2021 towards eligible green expenditures as identified in the Green Bond Framework. The content of this document is not subject to any approval or endorsement from ESMA or any other competent authority. This allocation report will to a certain extent seek to align with the requirements stated in annex II of the European Commissions' proposal for a European Green Bond Standard, but will not strictly follow the same structure. The external audit statement can be found in the annex of this report.

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1. Introduction

In line with the principles set up in the governance section in the Green Bond Framework¹, the Kingdom of Denmark has committed to annually publish an evaluation and selection of green bond expenditures through an Allocation Report.

In 2022, Danmarks Nationalbank issued green bonds on behalf of the Kingdom of Denmark for a market value of DKK 14.502 billion. The proceeds of the green bond issuance are linked to an appropriation account in the Danish government accounts (Statsregnskabet) from the current and previous fiscal year. In order to ensure that eligible green expenditures are timely and relevant, only expenses from the year of issuance and the year immediately preceding the issuance will thus be considered eligible to be financed by the proceeds from issuance in a given year.

In 2021, eligible green expenditures amounted to DKK 11.306 billion. All of these eligible green expenditures were financed with green bonds issued in 2022 (table 2.1). The remaining proceeds from the issuance of green bonds in 2022 (DKK 3.2 billion) will be allocated to eligible green expenditures for 2022. The estimate for expenditure levels for the current and previous year can be found on the Ministry of Finance website and will be updated annually.² For 2022, the expected eligible green expenditure amounts to DKK 10.9 billion.

The allocation report will demonstrate that the proceeds have been allocated in accordance with the current Green Bond Framework and its criteria for eligible green expenditures. An amount equivalent to the proceeds from the issuance of green bonds will be allocated to green expenditures and investments undertaken by the central government. This falls under the responsibility of the Inter-Ministerial Working Group (IMWG), in which the Ministry of Finance, Ministry of Transport, Ministry of Climate, Energy and Utilities and the Ministry of Taxation are its current members, including Danmarks Nationalbank as permanent observer and green bond issuer. The IMWG 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 covers two main UN sustainable development goals: Renewable Energy and Clean Transportation. The Green Bond Framework likewise contains a list of the main appropriation accounts in the Budget Act that comply with these

¹ Green Bond Framework - <https://fm.dk/arbejdsomraader/groenne-statsobligationer/>

² See document "Green Bond: Eligible green expenditures" on fm.dk/arbejdsomraader/groenne-statsobligationer/.

expenditure categories³. This report will seek to align with the latest standards as identified in the European Green Bond Standard⁴ (EU GBS) proposal from April 2022.

Danmarks Nationalbank may only issue green bonds corresponding to the amount of identified eligible green expenditures, less a safety margin that takes into account the uncertainty about the incurrence of expenses within the current year. The Ministry of Finance will determine the size of this buffer and inform Danmarks Nationalbank. Proceeds are continuously monitored by Danmarks Nationalbank within the existing debt management setup and mapped up against the amount of eligible green expenditures to ensure that proceeds do not exceed the amount of eligible green expenditures.

³ See the annex table II.1 for a detailed overview.






⁴ REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on European Green Bonds (WK 723/2022 INIT)



2. Allocation table

Table 2.1 Overview of eligible green expenditures, 2021 (DKK millions)

All expenditures have the Primary EU Environmental Objective of *Climate Change Mitigation*

Category	Description	Total expenses	Expenses allocated	Expenditure type
Renewable Energy				
Ministry of Climate, Energy and Utilities				
	Subsidies for electricity generation using solar photovoltaic technology	155.9	155.9	
	Subsidies for electricity generation using onshore and offshore wind power.	1,784.8 ¹⁾	1,784.8	Subsidy
	Subsidies for electricity generation from small wind turbines used in residential applications.	58.4	58.4	
	Ministry of Taxation			
	Taxation of electricity (Exemption for own consumption of electricity from solar energy)	273.0 ²⁾	273.0	Tax exemption
Clean Transportation				
Ministry of Transport				
	Rail infrastructure investment projects (including electrification of the rail infrastructure).	2,423.3	2,423.3	
	Rail infrastructure renovation, and maintenance.	2,407.3	2,407.3	Direct investments
	Rail infrastructure operation	401.8	401.8	
	Ministry of Taxation			
	Registration tax (Reduced registration tax for zero- and low-emission vehicles)	3,801.4 ²⁾	3,801.4	Tax exemption
Total		11,305.9	11,305.9	

Note: The remaining proceeds from the green bond issuance in 2022 (DKK 3.2 billion) will finance the eligible green expenditures for the fiscal year 2022.

Note: A detailed overview of the eligible green expenditures including references to the Danish government accounts can be found in the annex (table II.1) of this report.

1) For this budget item, the expenses are a corrected version of the expenses in the Government Financial Accounts for 2021 (Statsregnskabet), where an error in the treatment of certain payments has been identified.

2) The two tax expenditures are calculated separately from the Government Financial Account, and are based on estimates from the Ministry of Taxation. As such the eligible expenditure is subject to significant estimates with respect to behavioral effects as explained in section 4.2, yielding a conservative estimate of the total tax expenditures.

Source: Danish Ministry of Finance and the Government Financial Accounts for 2021 (Statsregnskabet).



3. Renewable energy

The Kingdom of Denmark is transforming the energy production sector to renewable energy to achieve its ambitious target of a 70 per cent reduction in CO₂-emissions in 2030 compared to 1990 levels. The Green Bond Framework includes three direct subsidy schemes and one indirect expenditure through a tax exemption scheme to incentivize this transformation. The expenditures are intended to support the production and development of renewable energy, thereby contributing to climate change mitigation.

3.1 Disbursements for PSO-subsidies and renewable energy subsidies

The public service obligation expenditures (PSO-expenditures) and subsidies for renewable energy are both subsidies for renewable energy production. The aim of the subsidies is to promote renewable energy production. The subsidies increases the competitiveness of various renewable energy sources against fossil fuel energy and make some higher cost energy sources more feasible. However, price reductions of technologies and business model developments as well as learnings on the regulatory and planning side have now made it possible for renewable electricity to be self-financed, and the need for subsidies in the future is expected to be very limited.

The Energy Agency pays the subsidies to producers of renewable energy to the electricity grid. The payment is either given as a fixed grant, at a fixed price per produced unit of electricity or a “contract for difference” between a set price and the market price of electricity. The compensation models depend on the energy type. The PSO-subsidies is, in particular, a function of the electricity prices and therefore can change from year to year.

PSO was originally a tariff program on utility bills financing all subsidies for clean energy originally introduced in 1998 in order to make clean energy alternatives competitive with fossil fuels. A higher market price results in a lower PSO-tariff and vice versa. Utility users paid a tariff based on power consumption, and the revenue was diverted to clean energy producers in the electricity grid.

The programs and the compensation model in itself are structured to promote the feasibility of renewable energy types against current electricity production. This means the programs will gradually fade out over time, when renewable energy sources become increasingly competitive against fossil fuels.

From 2022, the PSO-tariff is completely phased out and the corresponding subsidies for promoting renewable energy production will be placed on other appropriation accounts in the Danish Budget Act. It was politically agreed in 2016 to gradually phase out the PSO-tariff over the period 2017 to 2022, and instead finance the corresponding expenses over the Danish Budget Act. Subsidies for renewable energy has been fully financed via the Danish Budget Act since 2022, but was prior financed through the PSO program.

Due to the surge of energy prices in 2021, the allocated subsidies and PSO-subsidies diminished significantly and only accounted for approximately 2.0 DKK billion by end 2021. The subsidies contributed to the production of 3.5-3.7 GWh of renewable energy⁵.

3.2 Taxation of electricity (Exemption for own consumption of electricity from solar energy)

Electricity consumed by the owner of solar panels is exempt from taxation, as to incentivize acquirement of solar panels and use of renewable energy sources. This is one amongst other benefits of self-consumption from solar panels.

The Ministry of Taxation estimates and reports on the tax expenditure based on estimates using data regarding the capacity of privately owned solar panels from the Danish Energy Agency, as the self-consumed production is not registered.

There are different owner categories of solar panels and for each, the Danish Energy Agency have standard assumptions about production and the share of self-consumed production along with assumptions about source of heating in the related building. The assumptions regarding the source of heating rely on estimates from 2014, and thus the resulting estimate is due some uncertainty. Based on these assumptions, an estimate of the self-consumed production from solar panels results in approximately 450,000 MWh. The tax expenditure is estimated using the relevant levels of taxation for electricity, electricity used for heating, and electricity tax on businesses.

The electricity tax as of 2021 is 0.9 DKK per kWh, albeit it has been politically agreed to be reduced over the coming years. In 2021, the heating tax was set at 0.008 DKK per kWh, and the electricity tax on businesses was 0.004 DKK per kWh.

Of the estimated DKK 273 million in tax exemption for 2021, the electricity tax contributed with close to 100 per cent, while the heating tax contributed a miniscule amount, and the electricity tax on businesses an even lower amount.

⁵ A detailed description of the contributed production capacity can be found in the Impact Report.



4. Clean transportation

Making the Danish transportation network more sustainable is a key provider in the green transition and a key provider of eligible green expenditures in the Green Bond Framework. The framework includes two direct operating and capital expenditures for the rail network infrastructure and one indirect expenditure through a tax exemption.

4.1 Rail infrastructure operation, renovation and maintenance

The Danish railway infrastructure is currently, and in the coming years, undergoing large-scale investments to provide an upgraded, more effective and greener public transportation alternative to the use of private vehicles.

The rail infrastructure projects are carried out by Banedanmark, the Danish state's Railway Infrastructure Manager. The expenditures are divided into a component for operational expenditures reflecting spare parts and salaries for the maintenance workers among other things, and capital expenditures into replacement parts. The allocation of green expenditures concerns only the related capital expenditures.

The investment projects are related to improving existing railroad service or expanding the railroad service to new areas. The aim of the projects is to expand or enhance the railway service for Danish citizens, making this form of clean transportation more attractive compared to using the vehicle for instance.

The three key projects are the signalling programme, the electrification programme and speed upgrades. The signalling program concerns the creation of a comprehensive digital signalling system, increasing efficiency, and minimizing delays. Electrification concerns the electrification of the remaining parts of the railway network outside the main railway routes, so that climate-friendly electric trains can travel in all of Denmark. Speed upgrades entails enabling high-speed train service to increase the mode of transport's attractiveness.

Of all railway renewal and maintenance costs in the Green Bond Framework, approximately 70 per cent are estimated to benefit railway lines that will be electrified before 2030, while 30 per cent of costs are estimated to benefit non-electrified lines that will be operated by battery trains by 2030.

By 2030, less than 10 years from today, 100 per cent of the Danish state's railway trackside infrastructure and associated subsystems are planned (and financed) to be either electrified or readied for battery train operation, with electrified line

tracks taking up approximately 80 per cent of the state network length and battery-operated line tracks taking up the remaining 20 per cent. The total rail expenditures in the green bond framework amounted to DKK 5.2 billion and almost 2,000 km of railway track⁶.

4.2 Registration tax (Reduced registration tax for zero- and low-emission vehicles)

The transport sector is one of the largest emitters of greenhouse gases in Denmark. Emissions from the transport sector constitute around 29 percent of Denmark's total GHG emissions and the road transport sector accounts for about 90 percent of these. In 2020, the Danish government has put forward an ambition to place 1,000,000 zero- and low emission cars on the roads by 2030. At the end of 2020, the number of zero- and low emission cars was around 60,000 in the Danish car stock. By the end of 2021, the number had increased to almost 145,000 zero- and low emission passenger cars. The reduced registration tax for these vehicles provides a clear incitement for the consumer to purchase a green vehicle instead of a conventional vehicle relying solely on fossil fuels.

Zero- and low-emission vehicles receive a tax advantage in the registration tax compared to conventional vehicles. The tax advantage is larger for zero-emission vehicles (typically electrical vehicles) than for low-emission vehicles (typically plug-in hybrid vehicles). For zero-emission vehicles, the registration tax is discounted to 40 percent of the full tax, and then subtracted a flat fee of up to 170,000 DKK in 2021, while for low-emission vehicles, the registration tax is discounted to 45 percent of the full tax, and then subtracted a flat fee of up to 50,000 DKK. The discount consists of a lower rate and a higher tax deduction. These tax advantages will be reduced gradually towards 2030, but not to zero.

The average reduction in registration tax per newly sold zero-emission vehicle in 2021 was around 253,900 DKK and for low-emission vehicles was the reduction around 195,800 DKK.

The tax advantage for zero- and low-emission vehicles constitute a tax expenditure. The tax expenditure cover exemptions in the tax code that give an implicit subsidy to end consumers. The Ministry of Taxation estimates and reports on the tax expenditure. The aim of the tax expenditure is to promote taxpayers' behavioural decisions towards cleaner and greener options. Typically, the tax expenditure is calculated based on the difference in the full registration tax and the actual tax including the tax advantages, and then the expected sale of low- and zero-

⁶ A detailed description of the contributed clean transportation metrics will be published in the Impact Report.

emission vehicles, i.e. the direct loss of tax revenue. This would amount to a tax expenditure of almost DKK 18 billion in 2021.

However, such calculations overestimates the expected loss of tax revenue as it ignores behavioral effects. If the tax advantage for zero- and low-emission vehicles was removed and, thus, had to compete with conventional vehicles on equal market conditions, it is expected that the sale of these vehicles would be reduced to almost zero, which in turn reduces the expected revenue effect of a full registration tax on zero- and low-emission vehicles. Taking behavioral effects into account the expected loss of revenue is estimated to amount to just under DKK 4 billion for 2021.

I. Annex: Statement by the management

On behalf of the Danish Government, the Ministry of Finance has considered and approved the Kingdom of Denmark Allocation Report 2021 (the “Allocation report”).

The Allocation report has been prepared by the Ministry of Finance, with participation of relevant ministries forming part of the Inter-Ministerial Working Group (“IMWG”), in accordance with the Kingdom of Denmark Green Bond Framework, issued December 2021 (the “Green Bond Framework”).

In our opinion, the Allocation report gives a true and fair view of the use of proceeds for the year ended 31 December 2021. Further, in our view, the use of proceeds as reflected in the Allocation table on page 8, was allocated, in all material respects, in accordance with the principles, process, governance and selection and evaluation criteria of eligible green expenditure as outlined in section 2.2 of the Green Bond Framework.

Copenhagen, 1 March 2023

Head of Division, Ministry of Finance, Tax Policy and Capital Markets

Thomas Larsen

II. Annex: Audit Report

Independent auditor's report on a limited assurance engagement regarding the Kingdom of Denmark's Allocation Report 2021

To the Danish Ministry of Finance

We have performed a limited assurance engagement on the Allocation Report 2021 (hereinafter: "Allocation Report") for the green bonds issued by Danmarks Nationalbank on behalf of the Ministry of Finance. The Allocation Report was prepared on the basis of the Government Financial Accounts for 2021 and a list of positions of Eligible Green Expenditures in 2021 in accordance with the process for expenditure evaluation and selection as well as requirements for allocation reporting set out in the Kingdom of Denmark Green Framework dated December 2021. (hereinafter: "the framework"). Our assurance engagement was limited to assessing the accuracy of the allocation table (table 2.1 on page 8), (hereinafter "the allocation table") in the Allocation Report with regard to the proportional allocation of the proceeds from the Green Bond issuances. We express a conclusion providing limited assurance. The Allocation Report was prepared to report on the allocation of Eligible Green Expenditures to the green bonds in accordance with the framework. Our report may not be suitable for another purpose.

Management's Responsibilities

The Ministry of Finance is responsible for preparing the Allocation Report in accordance with the framework. The report was compiled by the Ministry of Finance on the basis of information provided and validated by the Inter-Ministerial Working Group, comprising the Ministry of Finance, the Ministry of Taxation, the Ministry of Transport and the Ministry of Climate, Energy and Utilities. The responsibilities of the Ministry of Finance include designing, implementing and maintaining internal control over information relevant to the preparation of the Allocation Report that is free from material misstatement, whether due to fraud or error. In addition, the Ministry of Finance is responsible for establishing objective criteria for preparing the Allocation Report as described in the framework and also measuring and reporting the Allocation Report based on the framework.

Auditor's responsibilities

Our responsibility is to express a conclusion about the allocation table, based on our work performed within our limited assurance engagement.

We conducted our examinations in accordance with ISAE 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information, and additional requirements under Danish audit regulation to obtain limited assurance about our conclusion.

Deloitte Statsautoriseret Revisionspartnerselskab applies International Standard on Quality Management 1, ISQM1, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the requirements for independence and other ethical requirements of the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior, and ethical requirements applicable in Denmark.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement; consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. The choice of assurance work is subject to the practitioner's professional judgment.

Within the scope of our limited assurance engagement, we performed the following work:

- Interviews of relevant members of the Inter-Ministerial Working Group (IMWG) in relation to the process, to assess the use of the proceeds, the reporting process and the internal controls to the extent relevant for forming our assurance opinion.
- Assessed the accuracy of the allocation tables against the suitability of the reporting criteria in the framework.
- Assessed the presentation of the information in the allocation table for internal consistency of overall presentation, structure, and content.

Conclusion

Based on our work performed, nothing has come to our attention that causes us to believe that the allocation table for 2021 has not been prepared, in all material aspects, in accordance with the process for expenditure evaluation and selection as well as the requirements for allocation reporting set out in the framework

Copenhagen, 1 March 2023

Deloitte

Statsautoriseret Revisionspartnerselskab
Business registration no. 33 96 35 56

Peter Kyhnaav-Vejgaard
State-Authorized
Public Accountant

Mads Stærdahl Rosenfeldt
Partner, Lead Reviewer

Identification no
(MNE) mne42833

III. Annex: Detailed overview of eligible expenditures

Table II.1 Detailed overview of eligible green expenditures

All expenditures have the Primary EU Environmental Objective of *Climate Change Mitigation*

Name	Expenditure Category	Appropriation account	EU taxonomy economic activity	Eligible expenditure amount (DKK MM)	
				2021	Amount allocated
Danish Ministry of Climate, Energy and Utilities					
Subsidies for renewable energy (PV systems and other small WE systems)	Renewable energy related subsidies	29.25.12.15	4.1	155.9	155.9
Disbursements for PSO-subsidies (Offshore wind)	PSO-subsidies	29.25.14.20.33	4.3	1,253.3 ²⁾	1,253.3
Disbursements for PSO-subsidies (Onshore wind)	PSO-subsidies	29.25.14.20.33	4.3	531.5	531.5
Subsidies for renewable energy (Household wind systems)	Renewable energy related subsidies	29.25.12.25	4.3	58.4	58.4
Ministry of Transport					
Rail infrastructure investment projects	Railroad investment projects	28.63.08	6.14	2,423.3	2,423.3
Banedanmark - Railinfrastructure renovation and maintenance	Railroad renovation and maintenance	28.63.05.10.22	6.14	1,537.0	1,537.0
Banedanmark - Railinfrastructure renovation and maintenance	Railroad renovation and maintenance	28.63.05.10.51	6.14	863.2	863.2
Banedanmark - Railinfrastructure renovation and maintenance	Railroad renovation and maintenance	28.63.05.20.51	6.14	7.1	7.1
Banedanmark - Railinfrastructure operation	Railroad renovation and maintenance	28.63.04	6.14	401.8	401.8

Table II.1 Detailed overview of eligible green expenditures (continued)**All expenditures have the Primary EU Environmental Objective of *Climate Change Mitigation***

Name	Expenditure Category	Appropriation account	EU taxonomy economic activity	Eligible expenditure amount (DKK MM)	
				2021	Amount allocated
Danish Ministry of Taxation					
Taxation of electricity (Exemption for own consumption of electricity from solar energy)	Tax expenditures	38.22.01.20 ¹⁾	4.17	273.0	273.0
Registration tax (Reduced registration tax for zero- and low-emission vehicles)	Tax expenditures	38.23.03.10 ¹⁾	6.5	3,801.4	3,801.4
Total				11,305.9	11,305.9

Note: All expenditures are in million DKK. For respective NACE codes of economic activities, see figure 1 in Kingdom of Denmark Green Bond Framework.

Source: Danish Ministry of Finance and the Government Financial Accounts for 2021 (Statsregnskabet).

- 1) The two tax expenditures are calculated separately from the Government Financial Account, and are based on estimates from the Ministry of Taxation. As such the eligible expenditure is subject to significant estimates with respect to behavioral effects as explained in section 4.2, yielding a conservative estimate of the total tax expenditures.
- 2) For this budget item, the expenses are a corrected version of the expenses in the Government Financial Accounts for 2021 (Statsregnskabet), where an error in the treatment of certain payments has been identified.

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