Stedin Groep
Green Bond Report

December 2022

STEDIN GROEP

Contents

1. Introduction

About Stedin Groep

Stedin Holding N.V. (hereafter "Stedin Groep") issued green bonds in 2019, 2021 and 2022 and currently issued €1.5 billion of green bonds in total. The proceeds have been invested in expanding and reinforcing the electricity grid ("E-Grid") to be able to keep pace with the energy transition. These investments are more important than ever.

Energy crisis demands acceleration

The Netherlands is implementing the Climate Agreement, facilitating economic development and connecting new homes to the E-Grid. It is a matter of great urgency to achieve these objectives; all the more so since we in the Netherlands are experiencing an energy crisis that demands acceleration of the energy transition. Economic developments, digitalisation and the consequential increasing demand for capacity in the E-Grid are proceeding quickly. The E-Grid has reached full capacity in more and more locations and it is temporarily not possible to connect businesses and new housing estates. To expand and create the necessary capacity in the E-Grid, significant investments are required. These investments are financed by operational cash flow and external financing, such as green bonds. The proceeds from these green bonds have been used to initiate new sustainable investments and refinance existing investments.

Stedin future investments

Stedin Groep will have to invest €8 billion up to 2030. Stedin expects that it will have to connect approximately 251,000 new homes (roughly the equivalent of a city the size of The Hague), 350,000 additional Electrical Vehicle (EV) charging points and over 5 gigawatts of sustainable power generated by wind turbines and solar panels in the period to 2030. A large proportion of the main distribution stations will get a capacity upgrade and thousands of new substations will be required in urban areas.

'Only together can we ensure that there is sufficient capital to continue investing in the energy transition and housebuilding in the Netherlands. It is important that all parties involved work together practically and financially on this major social challenge.'

More information

For more information on our sustainability strategy of Stedin's role in the energy transition, please visit the website[1] or check the annual reports[2] in which these topics are extensively covered.

Danny Benima
CFO

1 https://www.stedingroep.nl/eng/investor-relations/how-sustainable-is-stedin-group

2 https://www.stedingroep.nl/eng/investor-relations/financial-reports/

2. Green Bond issuance

Stedin issued its Second and Third Green Bond

Stedin Groep has three Green bonds outstanding each with a nominal amount of € 500.000.000. Our debut green bond was issued in May 2019. A second Green bond was issued in November 2021 and a third one in May 2022. All issues were arranged under our Euro Medium Term Note programme (EMTN).[3] In relation of the issuance of our second and third green bond we updated our Green Finance Framework to the latest standards of the International Capital Markets Association ("ICMA") Green Bond Principles ("GBP"), 2021 version and Loan Market Association ("LMA") Green Loan Principles ("GLP"), 2021 version. The updated version also reflects the tighter criteria set under the EU Taxonomy Climate Delegated Act (June, 2021) and the transparency requirements under the proposed EU Green Bond Standard (July, 2021). For further information, including definitions, we refer to our Green Finance Framework.[4]

Our second green bond, issued in November 2021 drew significant interest from both existing but also new ESG investors. The 5-year € 500 million bond was more than 4 times oversubscribed, this resulted in attractive financing terms. The bond was issued with an issue price of 99.666% and a coupon of 0.0%.

The third green bond was issued in May 2022 under more challenging market circumstances though still attracted significant interest from our investor community.
The 8-year € 500 million bond was almost 2 times oversubscribed and issued at an issue price of 99.318% and a coupon of 2.375%.

In accordance with our Green Finance Framework proceeds from the issued green bonds have been used, in whole or in part, to (re)finance Eligible Green Projects within the following Eligible Categories:

1. Renewable Energy
2. Energy Efficiency
3. Green Buildings

The Clean Transport category as defined the Green Finance Framework has not been included as a separate category in the Eligible Green Project Portfolio at this moment. These assets are part of our E-Grid and included in the Renewable Energy category.

Eligible Green Projects are in accordance with Stedin's One Planet Strategy and contribute to the United Nations Sustainable Development Goals (SDGs) relating to affordable and sustainable energy (SDG 7), sustainable cities and communities (SDG 11) and climate action (SDG 13). The Eligible Green Project categories are in accordance with EU Taxonomy Climate Delegated Act (June, 2021) confirmed in the pre-issuance Second Party Opinion[5] provided by ISS ESG.

In this report Stedin accounts for the use of proceeds, allocation and impact reporting of all issued green bonds. We also included some case studies as examples of projects that are being financed by these green bonds.

We have obtained limited assurance on the allocation of green bond proceeds to the eligible categories as included in the allocation report in Chapter 4. Other parts of this report were not subject to assurance procedures. See page 12 for the assurance report.

3 https://www.stedingroep.nl/-/media/project/groep/files/supplement-to-the-base-prospectus-20-may-2022.pdf

4 https://www.stedingroep.nl/-/media/project/groep/files/green-finance-framework.pdf

5 https://www.stedingroep.nl/-/media/project/groep/files/second-party-opinion.pdf

3. Use of proceeds

In accordance with the Green Finance Framework, proceeds of Stedin Groep's Green Finance Instruments will be used to finance and/or refinance, in whole or in part, new or existing Eligible Green Projects from any of the Eligible Green Project Categories as described below, together forming the Eligible Green Project Portfolio.

Renewable Energy includes the total E-Grid of Stedin and as such also all distribution stations, substations, cables and connections to wind and solar parks, households and businesses, facilitating, integrating and increasing the share of renewable energy in the grid. Replacing gas and other fossil fuels as an energy source implies Stedin needs to extend its E-Grid and existing infrastructure which requires capacity upgrades to transport higher quantities of Renewable Energy. Ultimately this contributes to lower CO_2 emissions.

Energy Efficiency includes all Smart Meters installed at customers by Stedin. Smart Meters contribute to a better customer understanding of energy usage. This enables active energy savings by customers and is essential for a future tariff structure where tariffs depends on the maximum peak per household. Lowering the maximum peak load would result in lower future investment requirements and thereby creating efficiency. Energy savings by customers also results in lower CO_2 emissions.

Green Buildings relates to all buildings with at the minimum a EPBD label A++, currently being our offices in Utrecht and Goes. Stedin has invested in energy efficiency of its offices which results in lower energy usage and CO_2 emissions.

4. Allocation Report

Allocation table

Portfolio date: 31 December 2021

The proceeds of Stedin Groep's Green Finance Instruments have been used to finance and/or refinance, in whole or in part, new or existing Eligible Green Projects from any of the Eligible Green Project Categories as defined below, together forming the Eligible Green Project Portfolio.

Proceeds from all the Green Bonds issued have been fully allocated to the Eligible Green Project Portfolio. The reporting principles for the allocation report can be found in the Green Finance Framework.[6] In its Green Finance Framework Stedin indicates it would report Eligible Green Projects on their asset value, additional information about each category is included in the paragraph 'notes to the allocation report' below.

Use of proceeds Allocation table							
Eligible green project portfolio as of 31 december 2021				**Green Funding**			
	Asset Value (€ mln)	Eligibility (%)	Eligible Assets (€ mln)	Issued Instruments	Issue Date	Maturity Date	Amount (€ mln)
Renewable energy	3,613	33%	1,196	XS2079678400	14-11-2019	14-11-2029	500
Energy efficiency	335	100%	335	XS2407985220	16-11-2021	16-11-2026	500
Clean transport	-	100%	-	XS2487016250	03-06-2022	03-06-2029	500
Green Buildings	34	100%	34				
Total Eligible Green Project Portfolio			**1,565**	**Total Green Funding**			**1,500**
Total Eligible Green Project Portfolio Unallocated			**65**				

Percentage of Net Proceeds of Green Funding allocated to Eligible Green Project Portfolio:	100%
Growth in Eligible Green Assets in the portfolio in financial year 2021 (in € mln)	308
Growth in Eligible Green Assets in the portfolio in financial year 2021 (in %)	24%

All Eligible Green Projects included in the Green Project Portfolio are realised and operated within the service area of Stedin Groep in The Netherlands.

Growth in the Eligible Green Project portfolio is driven by the Renewable Energy category, primarily being Stedin's E-Grid. The growth in portfolio of Eligible Green Assets has been calculated by applying the same methodology as has been used for the calculation of the year-end 2021 figures on the year-end 2020 figures. In the year 2021 our Eligible Green Project Portfolio grew by € 308 mln or 24% compared to the year-end 2020 balance.

6 https://www.stedingroep.nl/-/media/project/groep/files/green-finance-framework.pdf

Notes to the allocation report

In its Green Finance framework Stedin indicates it would report Eligible Green Projects on their asset value. Asset value is stated at cost less accumulated depreciation and impairment loss.

In addition, the following definitions apply for each category:

Renewably Energy pertains to the E-Grid. Its value is determined by taking the gross asset value for the E-grid, from which the customer received construction contributions on the E-Grid are deducted. To this net value as per our fiscal year end, the Renewable Electricity Production Ratio of a certain year is applied.
The Renewable Electricity Production Ratio is defined as the share of renewable electricity produced as a proportion of all electricity produced in the Netherlands. In 2021, this figure corresponded to 33.1%[7] (2020: 26.7).

Energy Efficiency is defined as the asset value of Smart Meters per our fiscal year end.

Green Buildings includes the asset value of offices which are certified with a EBPD label A++ as per our fiscal year end.

7 https://opendata.cbs.nl/statline/#/CBS/nl/dataset/80030ned/table?ts=1666872544633

5. Impact Report

Impact Reporting

As Stedin is committed to transparency and the application of market best practices, the table below provides our impact reporting in line with the ICMA Harmonized Framework for Green Bond Impact Reporting (June, 2021). For each of the Eligible Green Project Categories the estimated energy savings and / or avoided CO_2 emissions are stated in the table below.

Use of proceeds Allocation Table								
Green Bond Principles category	**Allocated amount (€ mln)**	**Share of Total Portfolio Financing**	**Eligibility for Green Bonds**	**Renewable energy transported (2021, in MWh)**	**Estimated annual avoided CO_2 emissions (in tCO_2 eq.) Scope I + II**	**Estimated annual avoided CO_2 emissions (in tCO_2 eq.) Scope III**	**Number of households with a smart meter installed**	**Estimated energy consump-tion savings (in GJ)**
Renewable energy	1,131	76%	100%	6,795,099		2,901,507		
Energy efficiency	335	22%	100%			132,060	1,948,419	1,113,382
Green Buildings	34	2%	100%		1,413			13,783
Total	**1,500**	**100%**						

Notes to the impact report

Renewable Energy

The renewable electricity transported has been estimated by applying the Renewable Electricity Production Ratio[8] of a certain year to the total number of KWhs[9] of electricity transported in that year. The estimated annual avoided CO_2 emissions have then been calculated using the total emission from the activity, using the WTW conversion factor of 0.427[10] .

Stedin notes that the positive impacts reported are a result of efforts made by both Stedin and other key stakeholders within the energy value chain. Including (and not limited to) the ones mentioned below:

- Electricity producers: Establishment of new renewable energy production facilities along Stedin's grid
- Consumers within Stedin's service area: Growing demand for renewable energy

Energy Efficiency

The energy consumption savings have been based on research indicating that smart meters account for a total 4 petajoule in energy savings for a total of 7 mln[11] households with a smart meter, ie 0.57 GJ per household. This equates to approximately 1% of the total domestic energy usage.[12] The avoided CO_2 emissions have then been calculated using the total emission from the activity, using the WTW conversion factor of 0.427.[13]

Green Buildings

The Utrecht premises have been renovated, leading to a smaller and more energy efficient building. As a result of the renovation, the total number of m^2 declined by 7,361 m^2, from 15,886 m^2 to 8,525 m^2.

The renovations in Goes were aimed at closing two of our three offices in the area and concentrating all activities in a single sustainable location with an office space of 4,585 m^2.

Avoided CO_2 emissions are calculated on the basis of the estimated energy use of the pre-renovation building compared to the energy use of the post-renovation building. To support the calculation, we used the average energy consumption for Dutch office buildings (900 MJ / m^2)[14] compared to the energy consumption post-renovation (351.4 MJ / m^2) for Utrecht and (358.9 MJ / m^2) for Goes based on the respective recent energy performance certificates.

The avoided CO_2 emissions have then been calculated using the direct emission from the activity, using the TTW conversion factor of 0.369[15] (scope I&II).

8 (as per November 2022) https://opendata.cbs.nl/statline/#/CBS/nl/dataset/80030ned/table?ts=1666872544633

9 See Stedin Holding N.V. 2021 annual report [pg 213]

10 https://www.co2emissiefactoren.nl/wp-content/uploads/2022/08/CO_2emissiefactoren-2022-2015-dd-14-7-2022.pdf

11 https://www.pbl.nl/sites/default/files/downloads/pbl-2021-energieverbruiksmanagers-in-nederland-3855_0.pdf

12 https://www.pbl.nl/sites/default/files/downloads/pbl-2021-energieverbruiksmanagers-in-nederland-3855_0.pdf

13 https://www.co2emissiefactoren.nl/wp-content/uploads/2022/08/CO_2emissiefactoren-2022-2015-dd-14-7-2022.pdf

14 https://www.tandfonline.com/doi/full/10.1080/23744731.2016.1187552

15 https://www.co2emissiefactoren.nl/wp-content/uploads/2022/08/CO_2emissiefactoren-2022-2015-dd-14-7-2022.pdf

6. Case Studies

Selected case studies

Phasing out 'SF6' in switchgear

SF6 is used as an insulation medium in our high and medium-voltage switchgear. We want to limit the use of these types of gas as far as possible by preventing new switchgear from containing SF6. The new standard medium-voltage switchgear that is installed for grid expansion or replacement is SF6 free. In 2021, SF6-free switchgear was installed 166 times (25.5% of the total switchgear). We are also running a tender for larger switchgear, where SF6-free switchgear is conferred an economic advantage due to a lower CO_2 footprint rating and the possibility for subsidy. In addition, we are working to minimise transport leakage from current switch gear containing SF6. We are carrying out studies in this regard in our Innovation Lab.

National Agenda on the Charging Infrastructure Network (NAL)

The NAL is a multi-year implementation programme resulting from the Climate Agreement. It covers charging stations on private driveways and at businesses as well as public and semi-public charging stations and fast chargers. The programme also includes the installation of charging infrastructure for the logistics sector. Smart solutions, which are jointly developed by the NAL, are essential to prevent peak loads occurring on the low-voltage grid. Smart charging has been proven to work well in multiple test beds and system pilot projects. The next step is a national uniform market model that grid managers support with new variable and semi-variable low-use consumer tariffs. The introduction of zero-emission zones means that the logistics sector must also embrace electrification. Stedin and ElaadNL are jointly researching the related necessary grid capacity on business parks and along freight corridors.

Innovation : smart charging

Smart charging involves charging electric cars as far as possible at times when sufficient sustainable energy is available at the lowest price. That way, we ensure that the electricity grid remains in balance and avoid consuming even more electricity during peak periods, among other things. The system was tested and further developed in five different test beds in the Utrecht region. This led to the creation of a sustainable energy system at district level. Locally generated energy is stored in electric cars and shared cars. The energy can then be returned to the district at a later moment through a smart charging point. More than 800 of these smart charging points have already been installed. Smart charging is the future and is key to ensuring optimal functioning of the energy grid.

Renewable energy

The energy transition and implementation of the commitments in the Climate Agreement are driving huge growth in electricity consumption. The E-Grid is not completely ready to cope with this increase. To safeguard the reliability of the grids into the future, it is essential that we invest in grid reinforcement. We are also focusing more on innovative, smart solutions in cooperation with the market.

Green Buildings

Stedin takes a conscious approach to its real estate. This means that we implement sustainability measures when undertaking renovation, during use as well as in relation to mobility. We green the CO_2 emissions from our buildings that we are unable to avoid or reduce by entering into green energy contracts with our suppliers. The Stedin@Work (see 'Professionally competent employees') work concept will furthermore result in lower accommodation and mobility costs in the longer term.

One of the investment highlights in the grid : Energy Island

Goeree-Overflakkee, or "Energy Island", as it is also known, is a major hub for renewable energy generation. The capacity of the wind farms there has been roughly 225 MW since the start of 2022. There are also several solar farms, with a total capacity of approximately 200 MW. In order to cope with these vast amounts of electricity, Stedin began a major expansion of the highvoltage station in Middelharnis in 2010. Six large transformers, four 50 kV switch systems and two 13 kV switch systems are being installed in phases. Two 150 kV connections have also been laid to the Rotterdam port area. These two extra connections are needed in case more energy is generated than is consumed. The volumes involved can be huge, as much as 390 MW, in the summer. In 2021, we completed the second phase, and the final phase is scheduled for completion in mid-2023.

Renovation of Anthony Fokkerstraat Goes

The renovation of our Goes location was undertaken in 2021. The aim was to create a sustainable building and to close two other locations. The new work environment in Goes was designed with flexibility and efficiency in mind, enabling us to add more workspaces. By applying various approaches, most notably the Stedin@Work work concept, in which working from home is an integral element, we have been able to achieve real estate consolidation. All parts of the building are now gas free, a heat pump has been installed, energy-efficient lighting and climate control systems have been fitted and 678 solar panels with a generating capacity of 190 kWp (kilowatt of power) have been installed on various roofs. In addition, 57 charge points have been created for electrification of company and other transport.

7. Assurance Report of the Independent Auditor

To the Supervisory Board and the Management Board of Stedin Holding N.V.

Our conclusion

We have examined the financial information with regards to the asset value of Eligible Green Projects as of 31 December 2021 as included in the Allocation Report of the Green Bond Report of Stedin Holding N.V. ("Company") in Rotterdam.

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the financial information with regards to the asset value of Eligible Green Projects as of 31 December 2021 as included in the Allocation Report of the Green Bond Report of Stedin Holding N.V. is not prepared in all material respects, in accordance with the applicable criteria.

Basis for our conclusion

We have performed our examination in accordance with Dutch law, including Dutch Standard 3000A 'Assurance-opdrachten anders dan opdrachten tot controle of beoordeling van historische financiële informatie (attest-opdrachten) (assurance engagements other than audits or reviews of historical financial information (attestation engagements)'. This engagement is aimed to obtain limited assurance. Our responsibilities in this regard are further described in the 'Our responsibilities for the examination of the financial information with regards to the asset value of Eligible Green Projects as of 31 December 2021 as included in the Allocation Report of the Green Bond Report' section of our report.

We are independent of Stedin Holding N.V. 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). Furthermore we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics).

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Applicable criteria

For this engagement, the following criteria apply:

- Stedin Groep Green Finance Framework, November 2021
- The paragraph 'Notes to the allocation report' as included in chapter 4 of the Green Bond Report

Responsibilities of the management board and the supervisory board

The management board of the Company is responsible for the preparation of the financial information with regards to the asset value of Eligible Green Projects as of 31 December 2021 as included in the Allocation Report of the Green Bond Report in accordance with the applicable criteria.

The management board is also responsible for such internal control as it determines is necessary to enable the preparation, measurement or evaluation of the financial information with regards to the asset value of Eligible Green Projects as of 31 December 2021 as included in the Allocation Report of the Green Bond Report that is free from material misstatement, whether due to fraud or errors.

The supervisory board is responsible for overseeing the Company's reporting process.

Our responsibilities for the examination of the financial information with regards to the asset value of Eligible Green Projects as of 31 December 2021 as included in the Allocation Report of the Green Bond Report

Our responsibility is to plan and perform the assurance assignment in a manner that allows us to obtain sufficient and appropriate evidence for our conclusion.

The procedures performed in this context differ in nature and timing and are less extent as compared to reasonable assurance engagements. The level of assurance obtained in a limited assurance engagement is therefore substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

We apply the 'Nadere voorschriften kwaliteitssystemen' (NVKS, Regulations for quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our examination included amongst others:

- identifying areas of the financial information with regards to the asset value of Eligible Green Projects as of 31 December 2021 as included in the Allocation Report of the Green Bond Report where a material misstatement, whether due to errors of fraud, are most likely to occur, designing and performing procedures responsive to these areas, and obtaining information that is sufficient and appropriate to provide a basis for our conclusion;

- considering the internal control relevant to the examination in order to select procedures that are appropriate in the circumstances, but not for the purpose of expressing a conclusion on the effectiveness of the company's internal control;

- making inquiries of management and others within the entity;

- determining the plausibility of the financial information with regards to the asset value of Eligible Green Projects as of 31 December 2021 as included in the Allocation Report of the Green Bond Report;

Rotterdam, 23 December, 2022

Deloitte Accountants B.V.

Signed on the original:
A. van der Spek

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Stedin Groep
P.O. Box 49
3000 AA Rotterdam
The Netherlands
www.stedingroep.nl

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