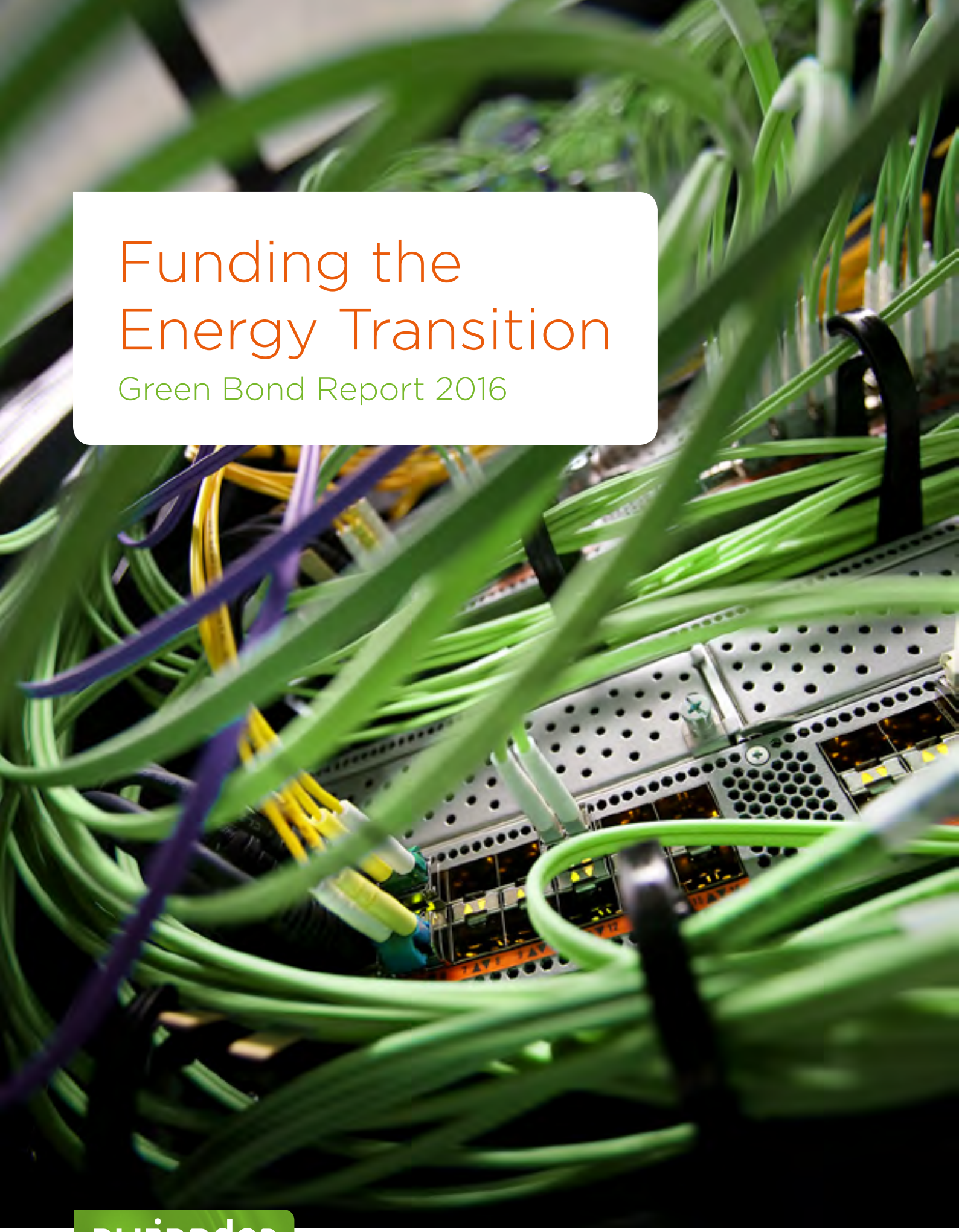


Funding the Energy Transition

Green Bond Report 2016

alliander

Introduction

In April 2016, Alliander issued its first green bond enabling investors to invest directly in a number of specific energy transition projects. This report provides insight into how the bond proceeds have been invested and how this could impact CO_2 emissions.

The transition from an energy supply that is mainly carbon based to one that is mainly renewable based is gaining traction. An important accelerator has been the 2015 Paris climate summit, COP21, where broad agreement was reached on attaining climate goals. As an energy network company it is our responsibility to facilitate this energy transition. Alliander stands for an energy system where everyone has equal access to reliable, affordable and renewable energy. Our strategy is aimed at integrating renewable energy sources in the electricity grid at an acceptable cost to society.

Transforming our electricity networks into smart grids is an important part of this strategy. Smart grids enable us to maintain quality and reliability of supply. This has become important because of the impact increased renewables generation will have on voltage quality and peak load. This follows from a high degree of simultaneity in the availability of renewables that in turn leads to greater fluctuations in energy supply.

In addition to our role in the energy transition we continue to make our assets and operations more sustainable, for example by investing in sustainable buildings.

Summary

Allocation reporting	Amount	% of bond proceeds allocated	
	EUR 300 million	100%	

Impact reporting	Project	Indicator	Value as at 31 December 2016
	Smart Grids/Smart Meters	# smart meters installed at customers	1,630,000 meters
		Potentially avoided CO_2 emissions (extra indicator)*	14.4 kiloton
	Sustainable Buildings/Duiven	Average primary energy consumption savings (in MJ/m^2) compared to the Dutch average	812.2 MJ/m^2
		Avoided CO_2 emissions	1.6 kiloton

Note: * See Impact Report on page 6 for more details

Alliander raised EUR 300 million through its 10-year green bond loan. The proceeds of this green bond have been used for the refinancing of those investments in the smart grid and sustainable buildings project categories in the period from 2013 to early 2016. In the smart grid category, the proceeds have been allocated to three projects: smart meters, fiber-optic telecom network and wireless telecom network (CDMA).
In the sustainable buildings category, we allocated the proceeds to our redeveloped premises in Duiven.

This report describes the sustainability performance of these projects in terms of energy savings and avoided as well as potentially avoided CO_2 emissions. Specific elements of this report were reviewed by Deloitte.
You will find the scope of the engagement and their conclusions in the assurance report on page 8

Transaction Review

Based on final allocations of the bonds, some 80% of the bonds have been allocated to investors with a clearly defined sustainability profile. In terms of geography, most demand came from Germany (29%), Benelux (23%) and France (20%).

Use of Proceeds

The projects are categorized in smart grids and sustainable buildings. The smart grid projects include installing smart meters and the construction of two telecom networks. The sustainable buildings project involves the redevelopment of our Duiven premises. The projects are described below in more detail.

Smart meters

An important part of the smart grid is the smart meter. This device records electricity and gas consumption and communicates via a wireless telecom network with the Distribution Service Operator (DSO). The meter data are communicated periodically to energy suppliers for monitoring and billing, and to customers at their own request. One of the main aims of this meter is to help customers to save on energy consumption by enabling them to get insight in their energy use. In the future a new application of the smart meter may become available that will allow for variable pricing of transport and energy delivery. This application will play an important role in enabling DSOs to improve matching energy demand with renewable energy supply, and may thus obviate large investments in laying extra cables to secure adequate distribution capacity. The actual implementation phase of the smart meter project started in 2012, with a pilot roll out of smart meters to gain experience on a small scale. Based on these insights, the large-scale offering has started in 2015. By law the Dutch DSOs are required to have offered smart meters to all of their customers in the consumer market and have an acceptance rate of at least 80% by the end of 2020. DSO Liander, a subsidiary of Alliander, currently has about 5.6 million customer connections for gas and electricity, all with separate meters. At the end of 2016, 1.6 million meters were installed.

Wireless Telecom network

Alliander uses wireless CDMA450 technology to read smart meters, sensors and control devices remotely. For the purposes of this project we have invested in a license and a transmission network. The project started in 2013 and was concluded in 2015. We own and operate the network together with DSO Stedin.

Fibre-optic telecom network

The project is aimed at building an integral data communication infrastructure for substations, operation control centres and other critical network components. Through this highly reliable and secure broadband telecom network the smart grid can be measured and operated remotely. The project has started in 2013 and will be concluded in 2017.

Redevelopment of our Duiven premises

Our office building in Duiven was redeveloped adhering to ambitious sustainability standards and has obtained a BREEAM-NL outstanding certificate. Our location in the east of the Netherlands consists of five office buildings that have been transformed into an energy-positive complex under one single roof. In line with the circular model, the old materials were largely reused in the building or recycled into raw materials for other products. The complex will ultimately generate more energy than it consumes, through a combination of insulation, renewable generation, recirculation and heat and cold storage. The redevelopment started in 2013 and was completed by the end of 2015.

Verification of the Sustainability Quality of the Green Bond

1. The quality of the various projects in terms of sustainability was verified by Oekom through a Green Bond Framework. Oekom, a leading rating agency in the field of sustainability, assessed the Alliander Green Bond Framework which describes the environmental and social indicators as well as the impact indicators related to the projects linked to the green bond issue. The overall sustainability quality and the sustainability performance of each of the funded assets in terms of benefits and risk avoidance minimisation are considered good. Oekom also stated that the pre-issuance requirements of the Climate Bond Standard were met. The above information can be found in the Second Party Opinion (SPO) issued by Oekom on 7 April 2016 [1].

2. No significant controversies have been reported in relation to the projects that have been financed by the Green Bond, as there were neither any major safety incidents nor any other incidents in 2016 which had a significant impact on the execution of the projects, environment or people.

[1] *https://www.alliander.com/en/investors/financing/senior-bonds*

Management of Proceeds

1. Alliander has opted for an one-off report because of the refinancing nature of the green bond. We have included some relevant impact indicators. These are in accordance with the commitments made hereof in the SPO. The proceeds were used to refinance loans that funded the projects when they were executed during the period 2013-2015 and a small part of 2016. For the Duiven project, the sustainable impact in terms of energy savings and avoided CO_2 emissions has been measured over a one-year period during which the location was fully operational.

   For the smart meters we present the number of smart meters installed. As extra impact indicator we provide an estimate of the potential energy savings and potentially avoided CO_2 emissions related to these savings.

2. In the Green Bond Framework Alliander committed to reporting on several impact indicators in relation to the projects. These indicators can be found under Impact Report on page 6 and 7.

Allocation Report

Total amount per project category and project financed by this bond (amounts in EUR million)

Smart Grids			**247**
	Smart Meters	169	
	Fibre-optic telecom network	48	
	Wireless telecom network (CDMA)	30	
Sustainable buildings			**53**
	Redevelopment of Duiven premises	53	
Total			**300**

As is clear from the table above, more than half of the proceeds, EUR 169 million, is invested in smart meters. By the end of 2020, we expect to have invested in total some EUR 800 million in the smart meter project.

Upon receipt of the EUR 300 million in bond proceeds in April 2016, EUR 288 million was directly used to refinance parts of the investments made in 2013, 2014 and 2015 according to the schedule that was presented in the Second Party Opinion by Oekom. The remaining EUR 12 million was used to refinance smart-meter investment in the first months of 2016.

Impact Report

We have committed to report on three impact indicators in relation to the projects. In addition we have included an extra indicator on the smart meter project.

1) Smart Grid/Smart Meter project: Number of smart meters installed at customers

Year*	Total cumulative number of smart meters for electricity and gas installed at customers at year-end
2012	379,000
2013	502,000
2014	706,000
2015	1,002,000
2016	1,630,000

*** as at 31 December**
The numbers shown for 2012, 2013, 2014 and 2015 also include meters installed at Endinet
Source: Annual reports 2012 -2016

2) Sustainable buildings / Duiven project: Average primary energy consumption savings (in MJ/m²) compared to the Dutch average

Year	Average primary energy consumption	Dutch Average	Energy consumption savings
2016	7.8 MJ/m²	820.0 MJ/m²	812.2 MJ/m²

Source: KPMG Sustainability, True Value case study, 9 maart 2017

The redeveloped Duiven premises have been fully operational since December 2015. A meaningful comparison between energy consumption before and after the redevelopment is difficult because of changes in the type of activities on the premises, as well as in the number of people working in the buildings. Therefore, we have chosen to compare the energy consumption of the redeveloped premises to the Dutch average.

3) Sustainable Buildings/Duiven project: Avoided CO_2 emissions

Year	Energy consumption savings	Avoided CO_2 emissions
2016	17,752,000 MJ	1.6 kiloton

Source: KPMG Sustainability, True Value case study, 9 maart 2017

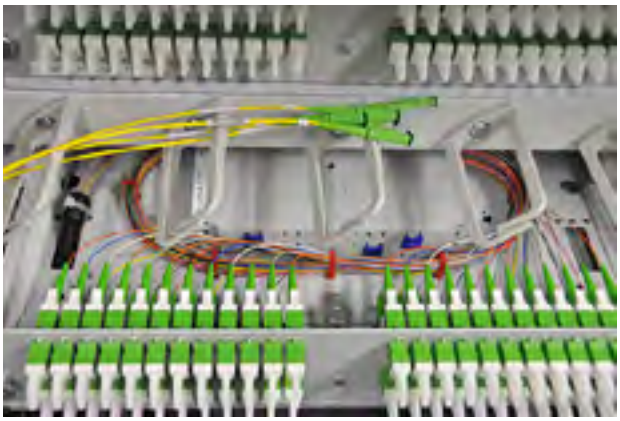
Avoided CO_2 emissions are calculated on the basis of 21,858m² of office space for the Duiven location while using the energy consumption savings per m² as calculated under 2).

Extra indicator
Smart Grid/Smart Meter project: Potentially avoided CO_2 emissions based on 1% savings on electricity and gas consumption

Year	Energy consumption savings	CO_2 Coefficient E and G	Potentially avoided CO_2 emissions
Electr.	13,113,000 KWh	0,4632 CO_2 / KWh	6.1 kiloton
Gas	4,406,000 M^3	1,884 CO_2 / M^3	8.3 kiloton

Several studies have been conducted into expected savings in electricity and gas consumption following the installation of smart meters. The results typically range from 1% to 6% in total savings. In the next few years more studies may be published that perhaps will provide a more narrow estimate of the level of energy savings caused by the smart meter, but attribution will remain difficult to prove and therefore a matter of discussion.

Although no assurance can be provided with respect to the % of energy savings,we have chosen to be conservative in our estimates by using 1% energy savings per year for both gas and electricity consumption. This percentage represents the change of energy consumption before the installation of the smart meter compared to a comparable period after the installation. We have made an estimate for avoided CO_2 emissions in relation to the expected savings. As inputs we used the number of installed smart meters financed with this green bond and the average electricity and gas consumption per household in our service areas.
This indicator has not been part of the set that was committed to in the SPO. However, we feel it is important to give insight in the potential impact of the smart meter in terms of energy savings and avoided CO_2 emissions. Therefore we added this extra indicator.



Assurance report of the independent auditor

To the Management Board of Alliander N.V.

The Management Board of Alliander N.V. ('the Company') engaged us to provide limited assurance on a selection of financial and non-financial information in the Green Bond report 2016 ('the Report').
We were engaged to provide limited assurance on the following information ('the reviewed information'):

- Use of Proceeds of the Green Bond to the designated projects as described in the Allocation Report (page 6)
- Indicators related to the designated projects to quantify the environmental Impact as described in the Summary Impact report (page 3):
  a) Smart Grid / Smart Meter project: Number of smart meters installed at customers (page 6)
  b) Sustainable buildings / Duiven: Average primary energy consumption (in MJ/m2) compared to the Dutch average (page 6)
  c) Sustainable buildings / Duiven: Avoided CO_2 emissions (page 6)

Limitations in our scope

Our engagement did not include the process for project evaluation & selection or the management process of proceeds as described in the green bond reporting framework, as disclosed on Alliander's website.

Management's responsibility

Management of the Company is responsible for the preparation of the Report in accordance with the definitions of the use of proceeds and indicators as developed by the Company as disclosed on page 6 (hereafter "the reporting principles as developed by the Company"). Furthermore, management is responsible for such internal control as it determines is necessary to enable the preparation of the Report that is free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express a conclusion on the Report based on our review. We conducted our review in accordance with Dutch law, including the Dutch Standard 3000 "Assurance engagements other than audits or reviews of historical financial information". This requires that we comply with ethical requirements and that we plan and perform the review to obtain limited assurance about whether the Report is free from material misstatement.
A review is focused on obtaining limited assurance. The procedures performed in obtaining limited assurance are aimed at the plausibility of information which does not require the same exhaustive gathering of evidence as in engagements focused on reasonable assurance. The procedures performed consisted primarily of making inquiries of management and others within the entity, as appropriate, applying analytical procedures and evaluating the evidence obtained. Consequently, a review engagement provides less assurance than an audit. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Procedures performed

Our main procedures included the following:

- Evaluating the acceptability of the reporting principles and their consistent application and the reasonableness of accounting estimates made by management.
- Evaluating the design and implementation of the systems and processes for data gathering and processing of information as presented in the Report;
- Interviews with relevant staff responsible for providing the information in the Report, carrying out internal control procedures on the data and the consolidation of the data in the Report.
- Evaluating internal and external documentation, in addition to interviews, to determine whether the information in the Report is reliable.

Conclusion

Based on our procedures performed nothing has come to our attention that causes us to conclude that the Report, in all material respects, does not provide a reliable and appropriate presentation of the reviewed information, in accordance with the reporting principles as developed by the Company as disclosed on page 6.

Amsterdam, March 30, 2017

Deloitte Accountants B.V.

J. Dalhuisen

April 2017

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Explanatory note
'We', 'Alliander' , 'the company' and similar expressions are used in this report as synonyms for Alliander N.V. and its subsidiaries.