Second Impact Report (2016-2018) of the 2016 BNG Bank Social Bond for Dutch Housing Associations

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Summary

This second impact report for the 2016 BNG Bank Social housing bond is based on a framework for assessing sustainability performance that measures the combination of the *internal* sustainability performance of the organization, including its head office and rented housing units, and the *external* sustainability performance of the neighborhood of the housing units.

The original group of 92 elected housing associations for the 2016 bond has been transformed as a result of mergers into a group of 85 elected associations.

The 85 elected associations showed an improvement in total sustainability score in the reporting period 2016-2018 from 50.7 till 51.9. A similar improvement showed the total group of 331 associations. So the elected group was able to maintain its higher score level over the past years (see table S1).

Table S1 Overview of the changes in sustainability scores over 2016-2018 for the groups of elected (n=85) and total (n=331) housing associations

Sustainability field and capital	Total 2016	Elected 2016	Total 2018	Elected 2018	Total: Difference 2016-2018	Elected: Difference 2016-2018
Total	**49.2**	**50.7**	**50.5**	**51.9**	**1.3**	**1.2**
Internal	47.3	50.1	49.6	51.9	2.3	1.8
External	51.0	51.4	51.3	51.9	0.4	0.5

Over the past two years period, the elected group realized 8,317 new housing units or 7.88 per 1,000 dwellings, compared to 6.33 for the total group. Both groups realized the same relative amount of new tenants (some 92 per 1,000 dwellings) or 96,907 for the elected group. The realized number of housing units with energy improvements amounted to 8,013 or 7.59 per 1,000 dwellings for the elected group, while the figure for the total group of 6.68 was considerably lower. So the elected group of associations was clearly more active in this period to achieve a better energy performance and contribute to the energy transition.

All types of housing associations showed improvement in sustainability scores over the period 2016-2018. However, improvement was highest for medium sized and old property types of associations.

The ten elected housing associations with the highest improvement over the reporting years are listed in Table S2.

Table S2 Elected housing association with the highest sustainability improvement over reporting years 2016-2018

No.	Housing association	Sustainability score 2018	Difference
1	Stichting Woonwijze	57.9	3.7
2	Stichting TBV Wonen	52.8	3.4
3	Stichting Huisvesting Vredewold	50.6	3.1
4	R&B Wonen	51.2	3.0
5	Woningstichting Vaals	53.1	2.9
6	Woonstichting Vryleve	50.6	2.8
7	Woningstichting Hellendoorn	53.6	2.8
8	Stichting Wonen Delden	54.3	2.8
9	Woonstichting De Key	51.7	2.6
10	Stichting Goed Wonen	55.2	2.5

Annex 2 shows that 84% of elected associations improved in sustainability performance in the past reporting years.

As far as the energy transition is concerned, the top ten performing housing associations for energy improved their energy score with 10%points or more. In general, a shift towards less electricity and gas consumption is dominant, accompanied by a rapidly growing use of solar panels.

The energy label is not always improved in this top 10 group. A reason is that not all units have been given a label in the past. This is obligatory at the moment that a property changes of owner. The score can be negative when old property changes of owner. The score can be very positive when a new complex of rental units is delivered or an existing one is renovated.

Only one of the elected associations showed a decline in energy score, probably due to the acquisition of old property.

Overall, the data show a steady transition over the past two years of the housing associations to higher sustainability levels.

1 Introduction

On 13 July 2016, BNG Bank issued its first Social Housing Bond, based on a prototype framework report[1] developed by Telos, Tilburg University at the request of BNG Bank on 2 February 2016. The 8-year € 1 billion social bond is used to finance social housing projects in the Netherlands.

During the year 2016 Telos has developed, as agreed, a more elaborated framework, based on the prototype framework used for the bond, including not only the performance of headquarters and rental units of housing associations but also characteristics of the neighborhood of the rental units. This elaborated framework[2] was accepted by BNG Bank at the end of 2016. In January 2017, BNG Bank decided to use the elaborated framework as the basis for the 8 years of impact reporting on the 2016 BNG Bank Social housing bond.

The first impact report for the 2016 BNG Bank Social housing bond was issued July 2017.[3]

This is the second impact report on this 2016 social housing bond. It briefly outlines the elaborated framework for impact assessment and the outcome in reporting year 2018 for the housing associations elected as best in class for the 2016 BNG Bank social housing bond.

Yearly impact reports generally include:

1. A comparison of sustainability scores over the assessment period of the group of elected housing associations and a comparison with the performance of the total group of housing associations.

[1] B.C.J. Zoeteman, R. Mulder and R. Smeets**,** A first framework for a BNG Bank Sustainable Social Housing Bond , Assessment from an integrated ecological, social, economic and governance point of view, Telos Report no. 16.145, 18 May 2016, Tilburg University, http://www.telos.nl/Publicaties/PublicatiesRapporten/default.aspx#folder=571960

[2] B.C.J. Zoeteman, and R. Mulder, Elaborated Framework 2016 for a BNG Bank Social Bond for Dutch Housing Associations, Assessment from an integrated ecological, social, economic and governance point of view, Telos report no. 16.160, 27 December 2017, Tilburg University, http://www.telos.nl/Publicaties/PublicatiesRapporten/default.aspx#folder=813915

[3] https://www.bngbank.com/Documents/Investors/Impact_report_WOBO_2016-2017.PDF

2. An analysis on the level of stocks, and occasionally on the level of indicators, in order to better understand causes of changes in performance.

3. A top-list of elected associations, which have shown the largest improvement in overall score and e.g. energy performance.

2 The framework for assessing sustainability of social housing associations and data used

2.1 The framework

The framework for assessing sustainability performance of housing associations is based on measuring the internal sustainability performance of the organization including its housing units and the external sustainability performance of the neighborhood of the housing units.
A prerequisite to operationalize the external performance is knowledge of the location of the rental units. Location specific data are, however, not easily accessible. Therefore, an approximation of the location specific sustainability characteristics of rental units of housing associations is followed as is also done for the frameworks of later BNG Bank Social housing bonds.
The result includes a framework based on 4 internal performance domains (called capitals) including governance, ecological, social and economic aspects and 3 external performance capitals (ecological, social and economic). The scores of the 7 capitals are calculated based on 25 themes (called stocks) which are derived from in total 79 indicators. A description of these indicators is given in Annex 1.

Due to changes in data availability, and new scientific insights, some adjustments were made in the framework. To keep the data comparable over the reporting years, the adjustments have been implemented in the 2016 and 2017 datasets as well. For a detailed overview of the changes in the dataset, see annex 1.

Internal and external performance are weighed equally as are the capitals within the internal, respectively external, sustainability domain.

The framework considers the same classes for associations as used in the prototype framework of 2016.

2.2 Data sources

The data for the impact report on internal sustainability are mainly derived from the Dutch Human Environment and Transport Inspectorate (ILT, Corpodata), The Dutch national statistical office (CBS), ABF research, and the most recent Aedes report 'Corporations in Perspective' (2018)[4] on the performance of Dutch housing associations. A more detailed elaboration of data used for external sustainability impact is available in Zoeteman and Mulder (2018)[5] from which table 2.1 is taken.

Table 2.1 Additional data sources for the external indicators used

Capital	Sources
Ecological capital	Compendium voor de Leefomgeving, Centraal Bureau voor de Statistiek, Emissieregistratie, Grootschalige Concentratiekaarten Nederland, WoonOnderzoek, RIVM, Risicokaart, KNMI, KRW portaal, Inspectie voor de Leefomgeving, Rioned, NOAA/NGDC, Nationale Databank Flora en Fauna, Rijkswaterstaat klimaatmonitor, lokale bronnen, RVO, ABF Research
Economic capital	Centraal Bureau voor de Statistiek, Uitvoeringsinstituut Werknemersverzekeringen, LISA, IBIS, Compendium voor de Leefomgeving, BAK; bewerking PBL, Kamer van Koophandel, CROW
Social-cultural capital	Centraal Bureau voor de Statistiek, Waarstaatjegemeente.nl, Databank Verkiezingsuitslagen, Verkiezingkaart, Nationale Zorg-toeslag, Kernkaart, Uitvoeringsinstituut Werknemersverze-keringen, Erfgoed databank, Elsevier " Beste ziekenhuizen", BVI Stuurkubus, Kinderen in tel; VerweyJonker instituut, Inspectie voor het Onderwijs

Most of the external sustainability data has been collected on the level of the neighborhoods, as described in the elaborated framework report of 2017. After that, the data was recalculated and attributed to the housing associations via a model developed by Telos. More detailed information about this model can be found in the elaborated framework reports.

[4] Aedes, 2018. Corporaties in Perspectief (CiP) 2016
[5] Zoeteman, B.C.J., and R. Mulder, Sustainability Framework for a 2018 BNG Bank Social Bond for Dutch Housing Associations, Telos report no. 18.189, August 2018, Tilburg University

2.3 Elected housing associations

Based on the 2016 Framework report sustainable housing associations, a group of 92 associations was elected from the original group of 328 associations. However, four of the originally 92 elected associations were no longer taken in considerations in the first impact report of 2017.

- Stichting Woonservice Urbanus (L1723) has been fused with Woningstichting WoonWENZ (L0274), so Stichting Woonservice Urbanus is no longer in the group of elected associations.
- Bernardus Wonen (elected) and Woningstichting Dinteloord (elected) have fused with Brabantse Waard (not elected) into the new housing association Woonkwartier. Therefore, they left the selection.
- Alkemade Wonen (not elected) and Woningstichting Buitenlust (elected) fused into the new housing association MeerWonen.

Therefore, four of the original group of 92 associations have been transformed, resulting into a group of 88 elected housing associations for the 2017 impact report.

In 2018, the situation has again changed. In total, a group of 331 associations has been assessed. The group of elected associations further diminished from 88 in 2017 to 85 in reporting year 2018. This is the result of three fusions.

- Woningstichting Nijkerk (elected) merged with Stichting De Nieuwe Woning (not elected) and was therefore removed from the elected group.
- Woonstichting St. Joseph (elected) merged with Stichting Goed Wonen Liempde (elected). The new Woonstichting St. Joseph stays in the elected group.
- Woningstichting Kessel (elected) merged with Stichting Antares Woonservice (not elected) and thus left the elected group.

3 Comparison of the performance of the elected housing associations over 2016-2018 with the total group

3.1 Sustainability performance of the elected housing associations over 2016-2018

Table 3.1 gives an overview of the general outcome over the past years. Values express the %points in achieving the sustainability goal for a certain aspect. The table presents the differences at the level of the total sustainability scores, the internal and external sustainability scores and the more detailed capital scores.

The group of 85 elected associations showed an improved total score in the reporting period 2016-2018 from 50.7 till 51.9, continuing the trend of past year. A closer look at the more detailed data indicates that the improvement is particularly due to a better performance of the internal sustainability (increasing from 50.1 till 51.9). Particularly the internal economic capital (loss of revenue, future housing units, etc.) improved strongly from 55.0 to 60.5. But also ecological capital (energy label, electricity use, etc.) and social-cultural capital (e.g. value for money, safety and security) improved. However, internal business scores declined somewhat from 49.7 to 47.7. The causes for these changes will be discussed in chapter 4.

For the external sustainability field the score showed also an improvement but of modest size (from 51.4 till 51.9). Here the ecological capital (air quality, noise annoyance, etc.), the economic capital score (unemployment, vacant retail space, infrastructure accessibility, etc.) and the social-cultural capital score improved a little bit.

Overall, these results are very positive and may be due to the general economic improvement in the country after the earlier years of recession.

Table 3.1 Overview of the differences in sustainability performance (% of achieving sustainability goals) of 85 elected housing associations over 2016-2018 compared with the total group (n=331)

Sustainability field and capital	Total 2016	Elected 2016	Total 2017	Elected 2017	Total 2018	Elected 2018	Total: Difference 2016-2018	Elected: Difference 2016-2018
Total	49.2	50.7	49.8	51.3	50.5	51.9	1.3	1.2
Internal	47.3	50.1	48.2	50.8	49.6	51.9	2.3	1.8
• Internal Business	47.4	49.7	46.2	48.3	45.7	47.7	-1.6	-2.0
• Ecological	43.1	45.6	43.9	46.0	45.6	47.5	2.5	1.9
• Economic	51.6	55.0	54.7	58.0	57.6	60.5	6.0	5.5
• Social-cultural	49.3	53.9	48.4	52.8	50.2	54.1	0.9	0.2
External	51.0	51.4	51.4	51.9	51.3	51.9	0.4	0.5
• Ecological	53.2	54.7	53.8	55.4	53.7	55.3	0.6	0.6
• Economic	48.6	48.3	48.6	48.4	48.7	48.6	0.1	0.2
• Social-cultural	51.2	51.1	51.7	51.7	51.7	51.8	0.5	0.7

3.2 Differences in sustainability between the group of elected associations and the total group over 2016-2018

The group of 85 elected associations kept better performing in 2016-2018 than the total group of 331 associations. But also in the total group the outcome has been improving over de past years. Trends for the different capitals are similar in both groups. Internal performance improved more in the total group (2.3 %points compared to 1.8%points), but external performance somewhat less than in the elected group (0.4 vs 0.5).

3.3 Some general differences between the group of elected associations and the total group over 2016-2018

From a general perspective, differences between the elected group of associations and the total group can also be compared. In table 3.2 a summary is given of the number of new housing units, the number of new tenants and the number of units with improvements in energy use realized in the period 2016-2018 for both groups of housing associations.

Table 3.2 Overview of the differences in general performance (new houses developed, new tenants, houses with energy improvements) between the group of 85 elected housing associations and the total group of associations (n=331) over 2016-2018

New houses developed				Allocations of new tenants				Energy improvement houses			
Elected associations		All Associations		Elected associations		All associations		Elected associations		All associations	
Total	per 1,000 dwellings	Total	per 1,000 dwellings	Total	per 1,000 dwellings	Total	per 1,000 dwellings	Total	per 1,000 dwellings	Total	per 1,000 dwellings
8317	7.88	30058	6.33	96907	91.80	436225	91.89	8013	7.59	31691	6.68

Table 3.2 shows that over the past two years period, the elected group realized 7.88 new housing units per 1,000 dwellings, compared to 6.33 for the total group. Both groups realized the same amount of new tenants (some 92 per 1,000 dwellings). The realized number of housing units with energy improvements amounted to 7.59 per 1,000 dwellings for the elected group, while the figure for the total group of 6.68 was considerably lower. So the elected group of associations was clearly more active in this period to achieve a better energy performance and contribute to the energy transition.

4 Further analysis of differences between the performance of elected associations and the total group

This chapter will look in more detail into the causes of the differences in sustainability scores identified in chapter 3.

4.1 Differences in internal sustainability

Internal sustainability improved from 2016 – 2018 with 1.8 %points for the elected associations and 2.3 for the total group. In the end the group of elected associations still scored 2.1 %points higher than the total group on internal sustainability. The details are shown in table 4.1.

Although slight differences are noted between the elected and total group, these are in most cases not significant.
All capitals scores, slightly improved more in the total group than the elected group. For ‘internal business’ is the score was less reduced in the total group than in eth elected group. The difference was most outspoken for the ‘social-cultural’ capital, improving 0.2 for the elected associations and 0.9 for the total group. This was mainly due to a better score on social cohesion (-2.9 for the elected group and 0.9 for the total group).

The fallback in ‘internal business’ scores in both groups was mainly due to lower ‘governance’ scores. Governance is measured by risks and concerns the combination of market risk, macro-economic risk and operational risk.

Although the total group has a tendency to narrow the gap with the elected group this process still is rather slow.

Table 4.1 Detailed differences at theme level over reporting years 2016-2018 for the elected associations group and the total group

Sustainability Field, Capital and Theme	2016	2018	*Difference 2016-2018*	2016	2018	*Difference 2016-2018*
	Elected	Elected	*Elected*	Total	Total	*Total*
Total score	***50.7***	***51.9***	***1.2***	***49.3***	***50.6***	***1.3***
Internal	50.1	51.9	1.8	47.5	49.8	2.3
Ecology	45.6	47.5	1.9	43.2	45.7	2.5
Energy	34.4	40.5	6.0	32.5	38.9	6.4
Resources and Waste	56.8	54.6	-2.2	53.9	52.5	-1.4
Economic	55.0	60.5	5.5	51.7	57.7	6.0
Corporational valuation	56.9	61.1	4.2	53.6	58.4	4.8
Future constancy	42.7	50.5	7.8	39.1	47.3	8.2
Loss of revenue	65.3	70.0	4.7	62.4	67.5	5.1
Internal Business	49.7	47.7	-2.0	47.5	45.9	-1.7
Ecology	45.1	44.5	-0.7	44.9	44.0	-0.9
Economic	48.1	45.6	-2.5	45.0	43.1	-1.9
Governance	48.5	43.9	-4.7	46.5	42.5	-4.1
Social	56.9	56.8	0.0	52.6	53.2	0.6
Social-Cultural	53.9	54.1	0.2	49.4	50.3	0.9
Physical and economic accessability	53.7	57.1	3.4	50.5	53.7	3.2
Safety and Security	52.0	54.6	2.6	49.4	51.0	1.7
Social cohesion	56.4	53.4	-2.9	46.0	46.9	0.9
Value for money	53.5	51.2	-2.3	51.6	49.6	-2.0
External	51.4	51.9	0.5	51.1	51.5	0.4
Ecology	54.7	55.3	0.6	53.3	53.9	0.6
Air	56.5	56.4	-0.1	53.1	53.3	0.1
Annoyance and Emergencies	60.0	59.9	-0.1	56.3	56.2	-0.1
Nature and Landscape	47.5	49.5	2.0	50.6	52.2	1.6
Social-Cultural	51.1	51.8	0.7	51.3	51.8	0.5
Social Participation	44.2	45.3	1.1	43.6	44.6	1.0
Economic Participation	44.3	43.8	-0.5	42.5	41.9	-0.6
Arts and Culture	50.0	50.0	0.0	53.1	53.0	-0.1
Health	55.4	56.4	1.0	55.3	56.3	1.0
Residential Environment	57.6	57.5	0.0	57.9	57.8	-0.1
Education	55.2	57.9	2.6	55.4	57.3	1.8
Economic	48.3	48.6	0.2	48.7	48.8	0.1
Labor	42.9	44.9	2.0	42.8	44.7	1.8
Competitiveness	40.2	39.4	-0.8	41.6	40.2	-1.4
Infrastructure and Accessability	61.9	61.4	-0.5	61.7	61.5	-0.2

4.2 Differences in external sustainability

The external sustainability has been included in the analysis as social housing associations have a certain degree of influence on the quality of the neighborhood of their property. The direct influence by specific investments has however been limited by recent national policy decisions, but indirectly this influence still remains considerable. The impact analysis, as represented in table 4.1, indicates that in both groups the external sustainability score showed a small improvement, which was a little bit more outspoken for the elected group of housing associations (0.5 versus 0.4).

A closer look at the capitals and stocks shows that also here differences between both groups are small. The most outspoken difference is found for the Social-Cultural capital (elected associations improved 0.7 versus the total group 0.5). A higher improvement in the education score is most responsible for this difference.

The elected group, however, scores only 0.4 %points higher on external sustainability than the total group.

5 Elected housing associations which have shown the largest improvement or greatest reduction in overall score over the years 2016-2018

This chapter will look into specific performance aspects of the associations in the elected group. Firstly, the impact of association typology on differences in performance will be discussed. Subsequently, elected associations showing the largest improvements or the greatest reductions will be presented.

5.1 Association typology and performance differences

The framework[6] for the 2016 BNG Bank social housing bond has discussed 10 types of housing associations and their performance differences. Based on the impact data collected, differences for these 10 types of associations are presented in table 5.1.

[6] B.C.J. Zoeteman, R. Mulder and R. Smeets, A first framework for a BNG Bank Sustainable Social Housing Bond , Assessment from an integrated ecological, social, economic and governance point of view, Telos Report no. 16.145, 18 May 2016, Tilburg University, http://www.telos.nl/Publicaties/PublicatiesRapporten/default.aspx#folder=571960

Table 5.1 Impact of association typology on sustainability performance differences

	Total sustainability score	Total sustainability score	Difference
Typology	**2016**	**2018**	**2016-2018**
Small	51.3	52.2	0.9
Medium	51.6	52.9	1.3
Large	50.9	52.0	1.1
X-Large	49.2	50.4	1.2
One-family dwellings	50.4	51.4	1.0
High-rise buildings	49.9	51.1	1.2
Oldest property	50.3	51.3	1.0
Old property	49.9	51.6	1.7*****
New property	50.6	51.8	1.2
Newest property	51.6	52.4	0.9*****
*** difference of this typology deviates significantly (p<0.05) with the average difference of all elected associations**			

All types of housing associations showed improvement in their sustainability score over the period 2016-2018. Like in the previous impact report, it was indicated that medium-sized associations are improving faster than the others are. They have been increasing their score by 1.3 to an average value of 52.9. This value is even higher than the type of associations with the newest property (52.4). Improvements over these two years were statistically significant for old property type of associations and again those with newest property.

The overall impression is that the sector is rapidly improving its sustainability performance for all types of associations.

5.2 Housing associations with the largest improvement over 2016-2017

Table 5.2 shows the 10 most improving associations over 2016-2018. Large improvements can be made by a housing association. In line with Table 5.1 many associations in the top 10 of improvement are medium sized, like past year.

Table 5.2 Ten elected associations showing largest sustainability improvement over 2016-2018

	Housing association	Typology	Sustainability score 2016	Sustainability score 2018	Difference
1	Stichting Woonwijze	Medium/New property	54.1	57.9	3.7
2	Stichting TBV	Large/High-rise buildings/Newest property	49.4	52.8	3.4
3	Stichting Huisvesting Vredewold	Small/Newest property	47.5	50.6	3.1
4	R&B Wonen	Large/One-family dwellings/Old property	48.2	51.2	3.0
5	Woningstichting Vaals	Medium/High-rise buildings/Old property	50.2	53.1	2.9
6	Woonstichting Vryleve	Medium/New property	47.8	50.6	2.8
7	Woningstichting Hellendoorn	Medium/New property	50.8	53.6	2.8
8	Stichting Wonen Delden	Small/Old property	51.5	54.3	2.8
9	Woonstichting De Key	X-Large/Oldest property	49.1	51.7	2.6
10	Stichting Goed Wonen	Medium/New property	52.7	55.2	2.5

Figure 5.1 Stadhouderspark of Stichting Woonwijze at Vught

Figure 5.2 Stichting TBV Wonen at Tilburg

Figure 5.3 Old church at Zevenhuizen to be renovated for 20 senior appartments by Stichting Huisvesting Vredewold at Leek

5.3 Housing associations showing greatest reductions over 2016-2018

Although most (84%) housing associations could improve their sustainability performance but this was not always the case, as is shown by Table 5.3. This table lists a number of elected associations for which sustainability performance declined the past two years. A more general overview of the differences in performance over 2016-2018 for the group of elected associations gives Annex 2. In Annex 3 sustainability changes over 2016-2018 for all 331 housing associations, presented in alphabetical order, are given.

Table 5.3 Elected housing associations with the greatest reductions in sustainability performance over 2016-2018

	Housing association	Typology	Sustainability score 2016	Sustainability score 2018	Difference
1	Stichting Woningbeheer De Vooruitgang	Small/Newest property	55.8	54.2	-1.6
2	Woningbouwvereniging De Goede Woning Driemond	Small/Oldest property	50.7	49.6	-1.1
3	'Ons Huis'. Woningstichting	Large/Newest property	51.8	50.9	-0.9
4	Woningbouwvereniging Lopik	Small/New property	54.5	53.7	-0.8
5	Woonstichting De Marken	Small/One-family dwellings/Newest property	52.8	52.0	-0.8
6	Woningstichting Tubbergen	Small/Newest property	53.4	52.7	-0.7
7	Stichting Rhiant	Medium/High-rise buildings/New property	52.6	51.9	-0.7
8	Oosterpoort Wooncombinatie	Large/Newest property	53.9	53.5	-0.5
9	Stichting Woonservice Drenthe	Large/Old property	47.5	47.1	-0.4
10	Jutphaas Wonen	Medium/High-rise buildings/Newest property	52.1	51.7	-0.4

It is difficult to signal a clear cause for the decline in scores. Part of the cause may be the acquisition of old property or of property in low scoring neighborhoods. A deeper analysis of such cases has to be made to explain the outcome.

6 Energy performance results within the group of elected associations

As the energy transition is at present at the forefront of (inter)national sustainability policies, this impact report will focus in particular on the indicators of relevance for the total energy score: electricity consumption, gas consumption, energy label of the rental unit, CO2 emissions of energy usage, and the availability of solar power surface. For the latter indicator no new data were available in the reporting year, except for differences due to changes in the property or changes in neighborhood borders.

6.1 Housing associations showing highest improvement in energy performance between 2016-2018

Table 6.1 shows the 10 best performing housing associations for energy, improving their total energy score with 10%points or more in 2016-2018. In general a shift towards less electricity and gas consumption is dominant, accompanied by increased use of solar panels.

The energy label is not always improved in this top 10 group. A reason is that not all units have been given a label in the past. This is obligatory at the moment that a property changes of owner. The score can be negative when old property changes of owner. The score can be very positive when a new complex of rental units is delivered or an existing one is renovated.

Table 6.1 Ten housing associations with the highest energy performance differences over 2016-2018

	Elected Association	Electricity consumption	Energy label	CO2 emission of energy usage[7]	Gas consumption	Solar power	Total Energy Score
		Difference 2016-2018	Difference 2016-2018	Difference 2016-2018	Difference 2016-2018	Difference 2016-2018	Difference 2016-2018
1	Woningstichting SWZ	31.4	7.6	0	19.1	14.5	14.6
2	De Woningstichting	28.9	2.5	0	9.6	19.2	13.4
3	R&B Wonen	31.4	-7.7	0	19.1	14.5	12
4	Woningstichting Openbaar Belang	23.3	6.5	0	6.5	17.4	11.5
5	Woningstichting Nijkerk	22.7	16.8	0	0.9	11.8	10.9
6	Woongoed Goeree-Overflakkee	14.7	9.6	0	13.8	13.9	10.4
7	Stichting Woonstede	19.7	6.8	0	17.5	7.6	10.4
8	Woningbouwvereniging Langedijk	15.7	-0.8	0	0.7	35.6	10.3
9	Christelijke Woongroep Marenland	15.6	9.3	0	10.6	14.2	10.3
10	Stichting KleurrijkWonen	13.9	8.9	0	14	11.1	10

6.2 Housing associations showing lowest differences energy performance between 2016-2018

Finally an overview of lowest improving elected associations on energy score is given in Table 6.2. For the explanations the same factors apply as discussed above.

As Table 6.2 indicates, only one association showed a decline in total energy score, which will be due to the acquisition of old property, as the energy label score indicates. Old property acquisition probably is the cause for all associations mentioned in Table 6.2 for the low improvement over the past two years.

[7] No data were available fort the previous reporting year; differences only due to property changes or changes in borders of neighborhoods

Table 6.2 Ten housing associations with the lowest energy performance differences over 2016-2018

	Elected Association	Electricity consumption	Energy label	CO2 emission of energy usage[8]	Gas consumption	Solar power	Total Energy Score
		Difference 2016-2018	Difference 2016-2018	Difference 2016-2018	Difference 2016-2018	Difference 2016-2018	Difference 2016-2018
1	Mitros	6.4	-19.2	0	4.4	4.6	-0.8
2	Woonstichting De Key	9	-20.1	0	11.9	2	0.7
3	Stichting Woonbedrijf SWS.Hhvl	-5.5	1.4	0	4.1	6.8	1.3
4	TIWOS Tilburgse Woonstichting	1	-9.8	0	7.7	7.6	1.3
5	Stichting WoonGoed 2-Duizend	6.7	-17	0	4.1	13.4	1.4
6	Woningbouwvereniging Lopik	0.3	-6.5	0	0.2	12.3	1.6
7	Stichting woCom	1.8	-5.9	0	2.2	11.3	1.9
8	Woningstichting de Zaligheden	2.2	-0.6	0	0.7	7.9	2
9	Woningstichting Meerssen	2.4	-7.5	0	0.6	14.5	2
10	BrabantWonen	7.3	-6.7	0	7.5	6.2	2.9

[8] No data were available fort the previous reporting year; differences only due to property changes or changes in borders of neighborhoods

Annexes

Annex 1: Description of indicators used for this framework

Adjustments in indicator set

Adjustments in the dataset and framework can occur on a yearly basis. Changes in data availability, new scientific insights and changing policies are examples of reasons to reconsider or adjust the framework. Because the datasets should be comparable over the different reporting years, adjustments are reconstructed for the previous years.

Within the dataset used for this performance report, three different kinds of changes were implemented. Some indicators have been added, some have been deleted from the analysis and some have been changed in definition. An overview of the adjustments is described in the next paragraphs.

Added indicators

- CO2 emission of energy usage; average co2 emission of the energy used for heating the dwellings (gas-consumption and external heat supply).
- Conformity of dwellings and target group; Match between the housing stock of a corporation with regard to the target group in the area of the possession of the housing association.
- Total amount of residual waste; Total amount of household waste produced in kg per inhabitant.
- Assessment of dwelling quality; Index between the assessed dwelling quality and the reference value of the Dutch national average.

Deleted indicators

- Share of forest and natural area; influence of housing associations is very limited. On top of that, we only selected neighborhoods with a lot of dwellings. So in general, there is little forest and natural areas in those neighborhoods.
- Expenses on quality of life (physical activities); in the most recent dataset, there is no distinction between social- and physical expenses on quality of life. That is why this indicator was combined and moved to the social capital to the expenses on social activities indicator (social cohesion).
- Total risk prognosis (2x); Risk prognoses are not in the DPI dataset anymore. Deleted due to data insufficiency.
- Percentage of proper allocations; was in the dataset twice. Total allocations within income limits is still in the dataset.

- Rental price per point in housing valuation points system; no available data.
- Total maintenance costs; new scientific insights. Does not fit the goals of the stock (social, in internal business capital).

Changed indicators

- Distance to public green; this indicator was in the community nature and landscape stock (ecology) in the internal performance domain. Reconsidering the meaning of this indicator, it fits better in the nature and landscape stock in the external performance domain.
- Average amount of points in housing valuation system; scoring system is not used in DVI anymore. So now the NEN 2767 condition score is used.
- Total costs energy measures; new definition: costs of residential improvements per rental unit. Includes energy measures and accessibility costs for elderly people.
- Number of rental units per FTE; changed to personnel costs divided by rental income (DEAB), due to data availability.
- Share of low-cost- and affordable dwellings; taken together into one indicator, to prevent for skewed distributions of scores.
- Utilization potential workforce; replaced by unemployment level.

Changes in stocks

Because of these changes in the dataset, the stock community nature and landscape in the internal performance has been excluded. Resulting in a total of 25 stocks instead of the original 26 stocks.

Indicators used to describe the external sustainability performance

Capital	Stock	Indicator	Description	Unit	Level
Ecology	Air	CO2 Emissions	Total CO2 emissions in kg per inhabitants	kg/inhabitant	District
Ecology	Air	NOx Emissions	Total nitrogen emissions in kg per inhabitants	kg/inhabitant	District
Ecology	Air	Particular matter (PM2.5)	Total particulate matter emissions in kg per inhabitants	kg/inhabitant	District
Ecology	Air	Concentration NOx	The average yearly concentration of nitrogen in the air in µg/m3	µg/m3	District
Ecology	Air	Concentration Particular Matter (PM2.5)	The average yearly concentration of particulate matter in the air in µg/m3	µg/m3	District
Ecology	Annoyance and Emergencies	Light Intensity	Yearly emission of artificial light	nanoWatts/cm 2/sr	Neighborhood
Ecology	Annoyance and Emergencies	Noise Intensity	Average background noise intensity	(Scale 1-8)	Neighborhood
Ecology	Annoyance and Emergencies	Earthquakes	The three-yearly moving average of the number of registered earthquakes in the area	Three-yearly average	Municipality
Ecology	Annoyance and Emergencies	Floods	Number of probable victims in case of a 100-year flood per squared kilometer	number of inhabitants	Municipality
Ecology	Nature and Landscape	Distance to Public Green	The average distance of inhabitants to all forms of public green (e.g. (recreational) parks and public gardens)	km	Municipality
Ecology	Nature and Landscape	Distance to Recreational Water	The average distance of inhabitants to any form of recreational water	km	Municipality
Ecology	Nature and Landscape	Biodiversity	The total number of observed species in the area in a 10 year period	species/km2	Municipality
Social-cultural	Social Participation	Volunteers	The share of people that was enrolled in any form of volunteering in the past 12 months	%	Municipality
Social-cultural	Social Participation	Turnout Municipal Elections	The turnout in the last municipal elections (2018)	%	Municipality
Social-cultural	Social Participation	Informal Caregiving	The share of people that was enrolled in any form of informal care giving in the past 12 months	%	Municipality
Social-cultural	Economic Participation	Financial Assets Households	The share of households in possession of financial assets of 5,000 Euro or more (excluding real estate dept.)	%	Municipality

Capital	Stock	Indicator	Description	Unit	Level
Social-cultural	Economic Participation	Social Welfare Benefits	The share of the potential labor force that receives social assistance in the form of social welfare benefits.	%	District
Social-cultural	Economic Participation	Poor Households	The share of households with a household income below 105% of the social minimum	%	District
Social-cultural	Arts and Culture	Performing Arts & Cinema's	Average distance per inhabitant to for instance a theater or cinema.	km	Neighborhood
Social-cultural	Arts and Culture	Distance to Museum	Average distance per inhabitant to a museum.	km	Neighborhood
Social-cultural	Health	Insufficient Exercise	Share of the inhabitants that does not meet the requirements of sufficient physical activity	%	Municipality
Social-cultural	Health	Risky Behavior	the share of the inhabitants that show risky behavior (heavy smokers or drinkers)	%	Municipality
Social-cultural	Health	Distance to General Practitioner	Average distance per inhabitant to a general practitioner.	km	Neighborhood
Social-cultural	Health	Life expectancy at Birth	The regional life expectancy at birth	Year	Municipality
Social-cultural	Health	Assessment of Own Health	The share of inhabitants that assesses their own health as 'good' or 'very good'	%	Municipality
Social-cultural	Residential Environment	Distance to Catering Facility	Average distance per inhabitant to catering facilities like restaurants or bars.	km	Neighborhood
Social-cultural	Residential Environment	Distance to Daily Goods and Services	Average distance per inhabitant to shops who provide daily goods and services.	km	Neighborhood
Social-cultural	Residential Environment	Satisfaction with Living Environment	The share of inhabitants that is satisfied with the living environment	%	Municipality
Social-cultural	Education	Distance to Elementary School	Average distance per inhabitant to the closest elementary school.	km	Neighborhood
Social-cultural	Education	Distance to Secondary Education	Average distance per inhabitant to the closest school for secondary education	km	Neighborhood
Social-cultural	Education	Early School Leavers	The share of people that leaves the education circuit without a diploma	%	Municipality

Capital	Stock	Indicator	Description	Unit	Level
Social-cultural	Education	Education Level	The share of low educated people in the 18+ population (excluding students)	%	Municipality
Economic	Labor	Unemployment	percentage of unemployed people in the potential labor force	%	Municipality
Economic	Labor	Active Labor force	The share of the potential work force that is currently active in the labor market	%	District
Economic	Competitiveness	Vacant Retail Space	The share vacant retail space	%	Municipality
Economic	Competitiveness	Gross Regional Product per Capita	The total regional production divided by the number of inhabitants resulting in a regional version of gross domestic product (GDP)	index	Municipality
Economic	Competitiveness	Share Highly Educated People	The total share of highly educated people	%	Municipality
Economic	Infrastructure and Accessibility	Access to Train Station	Average distance per inhabitant to the closest train station with a connection to the domestic railway network.	km	Neighborhood
Economic	Infrastructure and Accessibility	Access to Main Roads	Average distance per inhabitant to the closest main road access point.	km	Neighborhood

Indicators used to describe the internal sustainability performance

Capital	Stock	Indicator	Description	Unit	Level
Ecology	Energy	Electricity Consumption Rental Houses	Average electricity consumption of rental houses	kWh/dwelling	District
Ecology	Energy	Energy label index	This indicator represents the % of housing units of an association with a certain energy label. Based on scores attributed to the labels (AAA=0.505, AA=0.705, A=1.005, B=1.305, C=1.605, D=1.955, E=2.255, F=2.555, G=2.7.) The weighted average score of all housing units of the association is calculated.	index	Housing association
Ecology	Energy	CO2 emission of energy usage	Average co2 emission of the energy used for heating the dwellings. (gas-consumption and external heat supply)	kg/m2	Housing association
Ecology	Energy	Gas Consumption Rental Houses	Average Gas Consumption of Rental Houses	m3	District
Ecology	Energy	Solar Energy	Average installed capacity of solar (PV) panels per address (kW peak)	Installed capacity/dwelling	Neighborhood
Ecology	Resources and Waste	Total household waste	Total amount of household waste produced in kg per inhabitant	kg/inhabitant	Municipality
Ecology	Resources and Waste	Household general Waste	Total amount of residual waste produced in kg per inhabitant	kg/inhabitant	Municipality
Ecology	Resources and Waste	Organic Waste	Total amount of organic waste produced in kg per inhabitant	kg/inhabitant	Municipality
Ecology	Resources and Waste	Packaging Glass	Total amount of packaging glass collected in kg per inhabitant	kg/inhabitant	Municipality
Ecology	Resources and Waste	Paper and Cardboard Waste	Total amount paper and cardboard waste in kg per inhabitant	kg/inhabitant	Municipality
Ecology	Resources and Waste	Plastics	Total amount of plastic waste in kg per inhabitant	kg/inhabitant	Municipality
Economic	Corporational valuation	Average amount of points in housing valuation system	Condition-score based on the NEN 2767 norms for housing	score	Housing association
Economic	Corporational valuation	Loan to value	The ratio of the long term debts and the standardized association exploitation value.	€	Housing association
Economic	Corporational valuation	Standardized corporation value	standardized association exploitation value	€/rental unit	Housing association

Capital	Stock	Indicator	Description	Unit	Level
Economic	Corporational valuation	Standardized corporation value per rental unit	standardized association exploitation value per rental unit	€	Housing association
Economic	Future Constancy	Electric Vehicle Charging Station	Total amount of (semi-)public charging stations for electronic vehicles	charging stations/10,000 inhabitants	Municipality
Economic	Future constancy	New housing units prognosis 2017-2021	prognosis of extra income due to new rental houses realized	%	Housing association
Economic	Future constancy	New housing units realized	Number of newly constructed housing units to be rented as percentage of the total stock exploited in the reporting year. Newly constructed units destined for direct sale or for rental by third parties are excluded from this figure	%	Housing association
Economic	Future constancy	Remaining lifespan of property	The remaining lifespan of property is a standardized measure under the auspices of the CFV (Dutch: Centraal Fonds Volkshuisvesting) representing with a margin of 3 years the average remaining lifespan of the property of a association	Year	Housing association
Economic	Loss of revenue	Loss of rental income due to market conditions	This indicator measures loss of rental income due to vacancies exceeding 3 months as a result of market circumstances	%	Housing association
Economic	Loss of revenue	Loss of rental income due to vacancy	This indicator relates to vacancy as a result of the execution of projects	%	Housing association
Economic	Loss of revenue	Rent arrears	The percentage of the annual rent that is missed by outstanding rental arrears	%	Housing association
Internal Business	Ecology	Total costs residential improvements	Total costs of residential improvements per rental unit (energy measures and accessibility for elderly people)	€/rental unit	Housing association
Internal Business	Economic	Interest coverage ratio	Interest coverage ratio is based on net cash flow , national government contributions, corporate income tax, levies special project support and sanitation, divided by payed interest minus interest collected	ratio	Housing association
Internal Business	Economic	personnel costs by rental revenues (DEAB)	loans and salary divided by the number of rental units (DEAB)	%	Housing association

Capital	Stock	Indicator	Description	Unit	Level
Internal Business	Governance	Total allocations within income limits 2013-2015	Two-yearly average of the percentage of allocations within the income limits of the Wht	%	Housing association
Internal Business	Governance	Conformity of dwellings and target group	Match between the housing stock of a corporation with regard to the target group in the area of the possession of the housing association	%	Housing association
Internal Business	Governance	Total risk	Total risk is assessed by an external supervisor and concerns the combination of market risk, macro-economic risk and operational risk, which are independent risks. The squared risks are added and the root is drawn to calculate the total risk in a figure. To this value the corporate tax obligations are added.	%	Housing association
Internal Business	Social	Costs of complaints services	Costs of handling complaints from residents and users	ratio	Housing association
Internal Business	Social	Tenants' rating of social housing bond	Tenants' rating of social housing bond (1-10)	scale (1-10)	Housing association
Social-Cultural	Physical and economic accessibility	Physically highly accessible dwellings	Percentage of the housing stock that is accessible with wheelchairs or for people with physical disabilities	%	Housing association
Social-Cultural	Physical and economic accessibility	Share of affordable dwellings	The share of affordable and low cost dwellings suitable to provide housing to low income households within the regional market	%	Housing association
Social-Cultural	Safety and Security	Property Crimes	The number of arrested suspects for property related crimes per 10,000 inhabitants	crimes/10,000 inhabitants	Municipality
Social-Cultural	Safety and Security	Road Safety	The number of deaths or heavily wounded victims of traffic incidents per 1,000 inhabitants	crimes/10,000 inhabitants	Municipality
Social-Cultural	Safety and Security	Vandalism	The number of arrested suspects for vandalism per 10,000 inhabitants	crimes/10,000 inhabitants	Municipality
Social-Cultural	Safety and Security	Violent Crimes	The number of arrested suspects for violent crimes or sexual assaults per 10,000 inhabitants	crimes/10,000 inhabitants	Municipality
Social-Cultural	Social cohesion	Expenses on quality of life	Expenses on quality of the living environment (social and physical activities) per rental unit	€/rental unit	Housing association

Capital	Stock	Indicator	Description	Unit	Level
Social-Cultural	Value for money	Rent price as a percentage of the maximum permitted rent	Average rental price of the DEAB-dwellings divided by the number of points in the housing condition assessment (NEN 2767)	%	Housing association
Social-Cultural	Value for money	Rental price in percentage of the assessed value	Rental price in percentage of the assessed value	%	Housing association
Social-Cultural	Value for money	Assessment of dwelling quality	Index between the assessed dwelling quality and the reference value of the Dutch national average	index	Housing association

Annex 2: Sustainability progress of Elected housing associations

Housing Association	Total sustainability score 2016	Total sustainability score 2018	Difference 2016-2018
Stichting Woonwijze	54.1	57.9	3.7
Stichting TBV	49.4	52.8	3.4
Stichting Huisvesting Vredewold	47.5	50.6	3.1
R&B Wonen	48.2	51.2	3.0
Woningstichting Vaals	50.2	53.1	2.9
Woonstichting Vryleve	47.8	50.6	2.8
Woningstichting Hellendoorn	50.8	53.6	2.8
Stichting Wonen Delden	51.5	54.3	2.8
Woonstichting De Key	49.1	51.7	2.6
Stichting Goed Wonen	52.7	55.2	2.5
Stichting Talis	51.4	53.8	2.4
Woningbouwvereniging Nieuw-Lekkerland	47.2	49.4	2.3
Woonstichting Gendt	50.4	52.6	2.2
Woonstichting St. Joseph	52.0	54.2	2.2
Woningstichting SWZ	51.7	53.8	2.1
BrabantWonen	48.2	50.3	2.1
Woonstichting 'thuis'	53.2	55.4	2.1
Stichting Waardwonen	51.7	53.8	2.1
Casade Woonstichting	49.5	51.5	2.1
Woningstichting Leusden	54.2	56.2	2.0
Stichting IJsseldal Wonen	54.5	56.5	2.0
Vallei Wonen	55.8	57.7	1.9
Woningstichting Openbaar Belang	50.5	52.4	1.9
Stichting WBO Wonen	51.7	53.6	1.9
Waterweg Wonen	47.2	49.0	1.8
Woningcorporatie Domijn	47.5	49.3	1.8
Harmonisch Wonen	44.7	46.4	1.7
Bouwvereniging Woningbelang	51.7	53.4	1.7
Stichting voorheen De Bouwvereniging	51.0	52.6	1.6
WoonFriesland	43.9	45.5	1.6
Woningstichting Voerendaal	55.3	56.9	1.6
Woningstichting Barneveld	52.5	54.0	1.6

Housing Association	Total sustainability score 2016	Total sustainability score 2018	Difference 2016-2018
Stichting KleurrijkWonen	49.2	50.7	1.5
Stichting Woonstede	51.3	52.7	1.5
Woningstichting Spaubeek	50.1	51.6	1.5
Standvast Wonen	48.2	49.7	1.5
Stichting Wonen Vierlingsbeek	49.9	51.4	1.5
Wonen Noordwest Friesland	48.0	49.5	1.4
Stichting Destion	50.5	51.9	1.4
Stichting Woonservice Ijsselland	51.0	52.4	1.4
Stichting WoonGoed 2-Duizend	48.5	49.9	1.4
Stichting Jongeren Huisvesting Twente	49.8	51.2	1.4
Stichting WOONopMAAT	49.5	50.8	1.3
Woongoed Goeree-Overflakkee	49.2	50.5	1.3
Woningstichting SallandWonen	53.3	54.4	1.1
Stichting 3B-Wonen	48.9	50.0	1.1
Wovesto	54.9	55.9	1.1
Woningstichting Nijkerk	55.8	56.9	1.0
Bouwvereniging Huis en Erf	53.8	54.8	1.0
Stichting Wonion	50.9	51.8	0.9
R.K. Woningstichting Ons Huis	49.1	50.1	0.9
TIWOS Tilburgse Woonstichting	48.0	48.9	0.9
Stichting Wonen Zuidwest Friesland	51.1	52.0	0.9
Stichting Woningcorporaties Het Gooi en Omstreken	53.4	54.3	0.9
Mitros	53.6	54.5	0.9
Stichting Woonbedrijf SWS.Hhvl	52.6	53.5	0.8
Stichting Woonwaard Noord-Kennemerland	50.5	51.3	0.8
Woonstichting Land van Altena	47.7	48.5	0.8
Woningbouwvereniging Langedijk	54.2	54.8	0.7
Wooncorporatie ProWonen	53.1	53.7	0.6
Woonstichting Centrada	44.7	45.2	0.6
Woningstichting GoedeStede	50.8	51.4	0.5
Woningstichting WoonWENZ	48.2	48.8	0.5
Woningstichting de Zaligheden	51.1	51.6	0.5
de Woningstichting	54.6	55.1	0.5
Christelijke Woongroep Marenland	46.3	46.8	0.5
Woonstichting VechtHorst	57.2	57.6	0.4
Woonbron	46.2	46.4	0.2

Housing Association	Total sustainability score 2016	Total sustainability score 2018	Difference 2016-2018
Woningstichting Meerssen	50.5	50.7	0.2
Rondom Wonen	52.3	52.4	0.2
Regionale Woningbouwvereniging Samenwerking	51.1	51.1	0.0
R.K. Woningbouwstichting "De Goede Woning"	48.6	48.5	-0.1
Domesta	46.7	46.6	-0.1
Woningbouwvereniging Compaen	47.6	47.5	-0.1
Stichting woCom	47.6	47.3	-0.3
Jutphaas Wonen	52.1	51.7	-0.4
Stichting Woonservice Drenthe	47.5	47.1	-0.4
Oosterpoort Wooncombinatie	53.9	53.5	-0.5
Stichting Rhiant	52.6	51.9	-0.7
Woningstichting Tubbergen	53.4	52.7	-0.7
Woonstichting De Marken	52.8	52.0	-0.8
Woningbouwvereniging Lopik	54.5	53.7	-0.8
'Ons Huis'. Woningstichting	51.8	50.9	-0.9
Woningbouwvereniging De Goede Woning Driemond	50.7	49.6	-1.1
Stichting Woningbeheer De Vooruitgang	55.8	54.2	-1.6

Annex 3: Sustainability changes over 2016-2018 of all 331 housing associations (alphabetical order)

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Almelose Woningstichting Beter Wonen	44.9	48.4	*3.5*
Baston Wonen	51.4	51.1	*-0.3*
Bouwvereniging Huis en Erf	53.8	54.8	*1.0*
Bouwvereniging Huis en Hof	40.4	42.5	*2.1*
Bouwvereniging 'Huis en Hof' voor de gemeente Nijmegen	51.3	48.7	*-2.6*
Bouwvereniging Onze Woning	45.0	46.0	*1.0*
Bouwvereniging Woningbelang	51.7	53.4	*1.7*
Brederode Wonen	49.1	50.2	*1.0*
Charlotte Elisabeth van Beuningen Stichting	54.8	56.0	*1.3*
Christelijke Woningstichting De Goede Woning	52.4	56.7	*4.3*
Christelijke Woningstichting Patrimonium	51.8	51.4	*-0.4*
Christelijke Woongroep Marenland	46.3	46.8	*0.5*
Christelijke Woonstichting Patrimonium	55.5	58.3	*2.8*
de Woningstichting	54.6	55.1	*0.5*
de Woonmensen/SJA	50.8	50.0	*-0.8*
DUWO	52.4	53.8	*1.4*
FidesWonen	46.6	48.8	*2.2*
Groen Wonen Vlist	48.1	50.7	*2.6*
HW Wonen	48.6	51.4	*2.7*
Laurentius	45.6	47.0	*1.4*
l'escaut woonservice	46.0	47.2	*1.2*
Maaskant Wonen	51.1	51.7	*0.6*
Mercatus	50.7	51.6	*1.0*
Mitros	53.6	54.5	*0.9*
Noordwijkse Woningstichting	53.3	53.6	*0.3*
Ons Huis' Woningstichting	51.8	50.9	*-0.9*
Patrimonium woonservice	53.6	54.0	*0.4*
Pre Wonen	46.4	48.2	*1.8*
Provides	54.7	57.3	*2.6*
R&B Wonen	48.2	51.2	*3.0*
R. K. Woningbouwvereniging Zeist	52.1	53.6	*1.5*
R.K. Woningbouwstichting 'De Goede Woning'	48.6	48.5	*-0.1*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
R.K. Woningstichting Ons Huis	49.1	50.1	*0.9*
Regionale Woningbouwvereniging Samenwerking	51.1	51.1	*0.0*
Rentree	49.8	53.9	*4.1*
Ressort Wonen	47.2	48.4	*1.2*
Site Woondiensten	49.2	50.4	*1.1*
Stichting Zayaz	48.1	50.0	*1.9*
stichting 3B-Wonen	48.9	50.0	*1.1*
Stichting Acantus	43.9	45.1	*1.2*
Stichting Accolade	48.6	49.8	*1.2*
Stichting Actium	45.5	46.7	*1.2*
Stichting AlleeWonen	48.6	50.2	*1.5*
Stichting Antares Woonservice	48.2	48.6	*0.4*
Stichting Arcade mensen en wonen	50.6	51.2	*0.6*
Stichting Area	53.4	54.2	*0.9*
Stichting Beter Wonen	54.2	57.8	*3.6*
Stichting Bo-Ex '91	54.5	55.3	*0.7*
Stichting BrabantWonen	48.2	50.3	*2.1*
Stichting Casade	49.5	51.5	*2.1*
Stichting Christelijke Woningcorporatie	46.6	46.2	*-0.4*
Stichting Clavis	41.9	43.6	*1.8*
Stichting de Alliantie	49.1	51.6	*2.5*
Stichting De Delthe	46.7	47.0	*0.3*
Stichting De Goede Woning	50.4	51.6	*1.3*
Stichting De Huismeesters	51.7	54.2	*2.5*
Stichting De Leeuw van Putten	40.5	41.2	*0.7*
Stichting De Woonschakel Westfriesland	50.0	52.2	*2.2*
Stichting deltaWonen	51.6	53.4	*1.8*
Stichting Destion	50.5	51.9	*1.4*
Stichting Domesta	46.7	46.6	*-0.1*
Stichting Dudok Wonen	53.2	54.8	*1.6*
Stichting Dunavie	53.0	54.0	*1.0*
Stichting Eelder Woningbouw	49.6	53.1	*3.5*
Stichting Eemland Wonen	54.3	56.5	*2.2*
Stichting Elan Wonen	49.6	52.3	*2.7*
Stichting Elkien	45.8	46.9	*1.1*
Stichting Goed Wonen	52.7	55.2	*2.5*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Stichting GroenWest	50.4	51.1	*0.7*
Stichting Habion	45.6	48.6	*3.0*
Stichting Harmonisch Wonen	44.7	46.4	*1.7*
Stichting Havensteder	43.1	44.1	*1.0*
Stichting Heuvelrug Wonen	52.4	54.6	*2.2*
Stichting Huisvesting Bejaarden Oosterhout	53.9	51.4	*-2.5*
Stichting Huisvesting Vredewold	47.5	50.6	*3.1*
Stichting Idealis	57.2	58.9	*1.6*
Stichting IJsseldal Wonen	54.5	56.5	*2.0*
Stichting Intermaris	49.0	49.3	*0.3*
Stichting Jongeren Huisvesting Twente	49.8	51.2	*1.4*
Stichting KleurrijkWonen	49.2	50.7	*1.5*
Stichting Laurens Wonen	44.0	45.2	*1.2*
Stichting Lefier	45.0	46.3	*1.3*
Stichting Lek en Waard Wonen	47.2	49.4	*2.3*
Stichting Lyaemer Wonen	49.4	50.1	*0.6*
Stichting Maasdelta Groep	45.3	45.7	*0.4*
Stichting MeerWonen	51.1	52.6	*1.5*
Stichting Mijande Wonen	51.1	52.7	*1.6*
Stichting Mooiland	47.6	47.8	*0.2*
Stichting Mozaiek Wonen	48.9	50.5	*1.6*
Stichting Nijestee	52.7	51.9	*-0.8*
Stichting Omnia Wonen	49.2	51.6	*2.4*
Stichting Omnivera	46.3	48.5	*2.2*
Stichting Oost Flevoland Woondiensten	52.3	54.1	*1.8*
Stichting Oosterpoort Wooncombinatie	53.9	53.5	*-0.5*
Stichting Ouderenhuisvesting Rotterdam	47.2	46.7	*-0.5*
Stichting Parteon	46.1	48.8	*2.6*
Stichting PeelrandWonen	53.1	53.4	*0.3*
Stichting Plavei	48.4	50.7	*2.2*
Stichting Poort 6	47.7	48.0	*0.3*
Stichting Portaal	49.6	49.7	*0.0*
Stichting QuaWonen	51.1	52.7	*1.6*
Stichting RHENAM WONEN	49.5	49.5	*0.0*
Stichting Rhiant	52.6	51.9	*-0.7*
Stichting Rijnhart Wonen	51.2	53.7	*2.5*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Stichting Rijswijk Wonen	52.1	53.0	*0.9*
Stichting Rondom Wonen	52.3	52.4	*0.2*
Stichting Sint Trudo	49.7	49.2	*-0.6*
stichting SSHN	50.9	52.9	*2.0*
Stichting Stadgenoot	48.8	50.9	*2.1*
Stichting Stadlander	48.6	49.0	*0.4*
Stichting Stadsherstel Amsterdam	48.6	51.2	*2.6*
Stichting Staedion	45.5	46.2	*0.7*
Stichting Standvast Wonen	48.2	49.7	*1.5*
Stichting Steelande wonen	48.6	47.5	*-1.1*
Stichting Studenten Huisvesting	53.8	56.1	*2.3*
Stichting Tablis Wonen	47.7	48.7	*1.0*
Stichting Talis	51.4	53.8	*2.4*
Stichting TBV	49.4	52.8	*3.4*
Stichting Thuisvester	48.1	49.1	*1.1*
Stichting Thus Wonen	47.6	49.1	*1.5*
Stichting Trifolium Woondiensten Boskoop	49.1	49.7	*0.6*
Stichting Trivire	49.2	50.3	*1.0*
Stichting Uithuizer Woningbouw	46.8	48.6	*1.9*
Stichting UWOON	49.8	51.9	*2.1*
Stichting Velison Wonen	47.1	47.6	*0.5*
Stichting Vestia	44.2	45.9	*1.7*
Stichting Vidomes	48.5	47.5	*-1.0*
Stichting Vivare	47.0	47.9	*0.9*
Stichting Viverion	51.3	53.6	*2.3*
Stichting Volksbelang Vianen	48.7	51.3	*2.6*
Stichting Volkshuisvesting Arnhem	46.6	47.9	*1.3*
Stichting voorheen De Bouwvereniging	51.0	52.6	*1.6*
Stichting Waardwonen	51.7	53.8	*2.1*
Stichting WBO Wonen	51.7	53.6	*1.9*
Stichting Weller Wonen	47.1	48.5	*1.4*
Stichting Wetland Wonen Groep	49.5	50.0	*0.4*
Stichting woCom	47.6	47.3	*-0.3*
Stichting Wold en Waard	47.8	48.4	*0.6*
Stichting Wonen Delden	51.5	54.3	*2.8*
Stichting Wonen Midden-Delfland	55.6	58.0	*2.4*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Stichting Wonen Noordwest Friesland	48.0	49.5	*1.4*
Stichting Wonen Vierlingsbeek	49.9	51.4	*1.5*
Stichting Wonen Wateringen	46.4	50.4	*3.9*
Stichting Wonen Wierden-Enter	53.3	55.5	*2.2*
Stichting Wonen Wittem	48.2	49.5	*1.3*
Stichting Wonen Zuid	46.3	47.8	*1.5*
Stichting Wonen Zuidwest Friesland	51.1	52.0	*0.9*
Stichting WonenBreburg	47.0	49.3	*2.3*
Stichting Woningbedrijf Velsen	48.0	46.7	*-1.3*
Stichting Woningbedrijf Warnsveld	52.2	53.0	*0.8*
Stichting Woningbeheer Betuwe	49.0	50.4	*1.4*
Stichting Woningbeheer Born-Grevenbicht	49.3	50.3	*1.0*
Stichting Woningbeheer De Vooruitgang	55.8	54.2	*-1.6*
Stichting Woningbouw Achtkarspelen	48.8	49.2	*0.4*
Stichting Woningcorporatie Plicht Getrouw	47.2	49.1	*2.0*
Stichting Woningcorporatie WoonGenoot	51.4	53.2	*1.8*
Stichting Woningcorporaties Het Gooi en Omstreken	53.4	54.3	*0.9*
Stichting Wonion	50.9	51.8	*0.9*
Stichting Woon Compas	43.6	46.9	*3.3*
Stichting Woonbedrijf ieder1	50.1	52.5	*2.5*
Stichting Woonbedrijf SWS.Hhvl	52.6	53.5	*0.8*
Stichting Woonborg	50.0	51.3	*1.3*
Stichting Woonbron	46.2	46.4	*0.2*
Stichting Wooncompagnie	47.7	48.9	*1.3*
Stichting Woonconcept	48.3	51.3	*3.0*
Stichting Woondiensten Aarwoude	48.5	48.8	*0.2*
Stichting Woondiensten Enkhuizen	49.0	51.4	*2.3*
Stichting WoonForte	48.6	50.5	*1.9*
Stichting WoonGoed 2-Duizend	48.5	49.9	*1.4*
Stichting Woongoed Middelburg	51.2	53.2	*2.0*
Stichting Woongoed Zeeuws-Vlaanderen	42.3	43.0	*0.6*
Stichting Woongoed Zeist	48.5	49.2	*0.8*
Stichting Wooninvest	50.2	49.8	*-0.4*
Stichting Woonkracht10	49.4	49.2	*-0.2*
Stichting Woonkwartier	47.6	47.1	*-0.5*
Stichting Woonlinie	48.6	50.7	*2.1*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Stichting WOONopMAAT	49.5	50.8	*1.3*
Stichting Woonpalet Zeewolde	50.5	53.4	*2.9*
Stichting Woonpartners	47.4	49.4	*1.9*
Stichting Woonplus Schiedam	43.0	45.2	*2.2*
Stichting Woonpunt	42.4	44.1	*1.7*
Stichting Woonservice Drenthe	47.5	47.1	*-0.4*
Stichting Woonservice Ijsselland	51.0	52.4	*1.4*
Stichting Woonservice Meander	48.4	48.0	*-0.4*
Stichting Woonstad Rotterdam	46.3	46.5	*0.2*
Stichting Woonstede	51.3	52.7	*1.5*
Stichting Woontij	48.6	50.7	*2.0*
Stichting Woonveste	49.3	50.6	*1.3*
Stichting Woonvisie	48.8	49.7	*0.9*
Stichting Woonwaard Noord-Kennemerland	50.5	51.3	*0.8*
Stichting Woonwijze	54.1	57.9	*3.7*
Stichting Woonzorg Nederland	45.0	45.2	*0.2*
Stichting Wormerwonen	49.1	49.7	*0.6*
Stichting Ymere	48.8	50.3	*1.5*
Stichting Zaandams Volkshuisvesting	46.5	46.6	*0.1*
Stichting ZO Wonen	47.9	47.5	*-0.3*
TIWOS Tilburgse Woonstichting	48.0	48.9	*0.9*
Vallei Wonen	55.8	57.7	*1.9*
Veenendaalse Woningstichting	53.5	55.4	*1.9*
Vereniging tot Verbetering der Volkshuisvesting Rijsoord	44.4	46.7	*2.3*
Vereniging tot Verbetering der Volkshuisvesting Vooruitgang	47.5	49.4	*1.9*
Viveste	55.9	56.8	*0.9*
Wassenaarsche Bouwstichting	51.0	52.9	*1.8*
Waterweg Wonen	47.2	49.0	*1.8*
Welbions	49.3	50.2	*0.9*
Wonen Limburg	47.2	48.2	*1.0*
Woningbouwstichting Cothen	50.0	53.3	*3.3*
Woningbouwstichting De Gemeenschap	48.5	52.2	*3.7*
Woningbouwstichting Kamerik	53.9	51.2	*-2.7*
Woningbouwstichting 'Samenwerking'	46.0	47.8	*1.9*
Woningbouwvereniging Anna Paulowna	47.4	47.6	*0.2*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Woningbouwvereniging Arnemuiden	49.8	50.3	*0.5*
Woningbouwvereniging Bergopwaarts	49.7	51.1	*1.4*
Woningbouwvereniging Beter Wonen	45.5	50.0	*4.5*
Woningbouwvereniging Beter Wonen	46.9	48.9	*2.0*
Woningbouwvereniging Beter Wonen	46.9	48.2	*1.3*
Woningbouwvereniging Beter Wonen	47.8	50.0	*2.1*
Woningbouwvereniging 'Beter Wonen'	44.9	45.3	*0.4*
Woningbouwvereniging Bolnes	46.0	48.8	*2.8*
Woningbouwvereniging Compaen	47.6	47.5	*-0.1*
Woningbouwvereniging De Goede Woning - Neerijnen	43.8	45.0	*1.2*
Woningbouwvereniging De Goede Woning Driemond	50.7	49.6	*-1.1*
Woningbouwvereniging De Sleutels van Zijl en Vliet	49.2	51.1	*1.9*
Woningbouwvereniging Gelderland	48.0	49.5	*1.5*
Woningbouwvereniging Goed Wonen	51.4	52.6	*1.2*
Woningbouwvereniging Habeko Wonen	47.7	50.8	*3.1*
Woningbouwvereniging Heerjansdam	48.2	49.9	*1.6*
Woningbouwvereniging Helpt Elkander	51.4	52.9	*1.5*
Woningbouwvereniging Hoek van Holland	48.1	51.2	*3.1*
Woningbouwvereniging Langedijk	54.2	54.8	*0.7*
Woningbouwvereniging Laren	48.6	51.2	*2.6*
Woningbouwvereniging Lopik	54.5	53.7	*-0.8*
Woningbouwvereniging Maarn	53.6	56.3	*2.8*
Woningbouwvereniging Oostzaanse Volkshuisvesting	49.8	51.0	*1.2*
Woningbouwvereniging Oudewater	51.7	55.5	*3.8*
Woningbouwvereniging Patrimonium	46.1	47.8	*1.6*
Woningbouwvereniging Poortugaal	48.8	50.5	*1.6*
Woningbouwvereniging Reeuwijk	51.5	51.4	*-0.1*
Woningbouwvereniging Rosehaghe	45.7	49.0	*3.3*
Woningbouwvereniging Samenwerking Slikkerveer	44.8	46.4	*1.7*
Woningbouwvereniging St. Willibrordus	54.7	53.3	*-1.5*
Woningbouwvereniging 't Goede Woonhuys	47.3	46.6	*-0.7*
Woningbouwvereniging van Erfgooiers te Laren N.H.	49.9	51.9	*1.9*
Woningbouwvereniging Vecht en Omstreken	48.1	49.1	*1.0*
Woningbouwvereniging Volksbelang	50.0	49.1	*-0.9*
Woningstichting Barneveld	52.5	54.0	*1.6*
Woningstichting Berg en Terblijt	47.7	48.1	*0.3*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Woningstichting Beter Wonen Vechtdal	53.6	55.4	*1.8*
Woningstichting De Volmacht	43.0	43.7	*0.7*
Woningstichting De Voorzorg	46.3	46.1	*-0.2*
Woningstichting De Woonplaats	47.0	49.3	*2.3*
Woningstichting de Zaligheden	51.1	51.6	*0.5*
Woningstichting Den Helder	44.4	45.6	*1.2*
Woningstichting Domijn	47.5	49.3	*1.8*
Woningstichting Domus	51.0	50.6	*-0.4*
Woningstichting Eendracht	44.9	46.7	*1.8*
Woningstichting Eigen Haard	47.1	50.6	*3.4*
Woningstichting GoedeStede	50.8	51.4	*0.5*
Woningstichting Gouderak	44.6	45.0	*0.3*
Woningstichting Gulpen	47.6	49.8	*2.2*
Woningstichting Haag Wonen	44.0	43.7	*-0.3*
Woningstichting HEEMwonen	48.4	50.4	*2.0*
Woningstichting Hellendoorn	50.8	53.6	*2.8*
Woningstichting Het Grootslag	46.8	50.7	*3.9*
Woningstichting Heteren	52.9	53.1	*0.3*
Woningstichting Kennemer Wonen	51.1	53.7	*2.6*
Woningstichting Kleine Meierij	46.6	47.6	*1.0*
Woningstichting Kockengen	45.6	46.4	*0.9*
Woningstichting Leusden	54.2	56.2	*2.0*
Woningstichting Maasdriel	49.5	51.0	*1.5*
Woningstichting Maasvallei Maastricht	48.8	49.9	*1.2*
Woningstichting Meerssen	50.5	50.7	*0.2*
Woningstichting Naarden	52.5	53.4	*0.9*
Woningstichting Nieuwkoop	47.7	48.2	*0.5*
Woningstichting Nijkerk	55.8	56.9	*1.0*
Woningstichting Obbicht en Papenhoven	52.2	53.7	*1.5*
Woningstichting Ons Doel	47.1	49.7	*2.6*
Woningstichting Openbaar Belang	50.5	52.4	*1.9*
Woningstichting Putten	57.1	58.4	*1.3*
Woningstichting Rochdale	46.4	48.3	*1.9*
Woningstichting SallandWonen	53.3	54.4	*1.1*
Woningstichting Samenwerking Vlaardingen	44.5	47.1	*2.6*
Woningstichting Servatius	47.2	48.7	*1.5*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Woningstichting Simpelveld	46.2	46.5	*0.4*
Woningstichting Spaubeek	50.1	51.6	*1.5*
Woningstichting St. Antonius van Padua	51.3	53.2	*1.9*
Woningstichting St. Joseph	42.5	45.6	*3.2*
Woningstichting St. Joseph	47.1	50.1	*3.0*
Woningstichting SWZ	51.7	53.8	*2.1*
Woningstichting Tubbergen	53.4	52.7	*-0.7*
Woningstichting Vaals	50.2	53.1	*2.9*
Woningstichting Van Alckmaer voor Wonen	48.6	50.5	*1.8*
Woningstichting Veluwonen	52.6	54.2	*1.6*
Woningstichting Voerendaal	55.3	56.9	*1.6*
Woningstichting Volksbelang	50.3	52.6	*2.3*
Woningstichting Weststellingwerf	49.0	51.1	*2.1*
Woningstichting Wierden en Borgen	47.4	47.5	*0.0*
Woningstichting Woensdrecht	51.6	51.2	*-0.5*
Woningstichting Woonvizier	48.6	50.6	*1.9*
Woningstichting WoonWENZ	48.2	48.8	*0.5*
Woningstichting Wuta	46.3	48.3	*2.0*
Woningvereniging Nederweert	52.1	50.7	*-1.4*
Wooncorporatie ProWonen	53.1	53.7	*0.6*
WoonFriesland	43.9	45.5	*1.6*
Woongoed Goeree-Overflakkee	49.2	50.5	*1.3*
Wooninc.	47.4	50.4	*3.0*
Woonpartners Midden-Holland	50.4	52.8	*2.3*
Woonstichting Centrada	44.7	45.2	*0.6*
Woonstichting De Kernen	48.8	49.8	*0.9*
Woonstichting De Key	49.1	51.7	*2.6*
Woonstichting De Marken	52.8	52.0	*-0.8*
Woonstichting De Zes Kernen	42.6	45.9	*3.2*
Woonstichting Etten-Leur	51.6	52.3	*0.7*
Woonstichting Gendt	50.4	52.6	*2.2*
Woonstichting Groninger Huis	44.3	45.3	*1.0*
Woonstichting Hulst	50.1	51.5	*1.4*
Woonstichting Jutphaas	52.1	51.7	*-0.4*
Woonstichting Land van Altena	47.7	48.5	*0.8*
Woonstichting Leystromen	47.1	47.5	*0.5*

Housing Association	Total sustainability score 2016	Total sustainability score 2018	*Difference 2016-2018*
Woonstichting SSW	51.3	51.7	*0.4*
Woonstichting St. Joseph	52.0	54.2	*2.2*
Woonstichting Stek	51.3	53.1	*1.8*
Woonstichting 't Heem	48.6	51.8	*3.2*
Woonstichting 'thuis	53.2	55.4	*2.1*
Woonstichting Triada	51.0	52.2	*1.2*
Woonstichting Valburg	51.7	54.5	*2.8*
Woonstichting VechtHorst	57.2	57.6	*0.4*
Woonstichting Vooruitgang	48.7	54.2	*5.5*
Woonstichting Vryleve	47.8	50.6	*2.8*
Wovesto	54.9	55.9	*1.1*
Zeeuwland	46.0	47.6	*1.6*