



# Methodology for measuring BNG Bank's impact

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**Abstract:** Description of the methodology  
for determining % impact in 2023

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Driven by social impact

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**Everything BNG Bank does is aimed at making a social impact. When we dream about BNG Bank in 2023, we see a bank with impact: clients regard us as a natural partner for solving social issues, we are successful in this and we can demonstrate that. In order to achieve this ambition, we must work hard together.**

## **Introduction**

In 2020, BNG Bank stated an ambition to make 10% more social impact in 2023 relative to 2021. This was laid down in the 2020 strategy memorandum. To determine whether BNG Bank is on track to achieve that ambition, it is important to properly define and be able to measure impact. The relevant methodology is described in this document.

This methodology was developed and written by Anita de Horde & Anne Dijkstra, independent advisers, commissioned by BNG Bank.

In addition to this document, a separate Reporting Manual was provided with information about the data of the impact to be measured on which BNG Bank will report.

## Impact framework

### Introduction

BNG Bank decided to target 10% impact via 5 of the total of 17 Sustainable Development Goals (SDGs) that were set by the United Nations in 2015 as the global 2030 agenda for sustainable development. BNG Bank selected the following SDGs, which are closely aligned with its principal client groups:

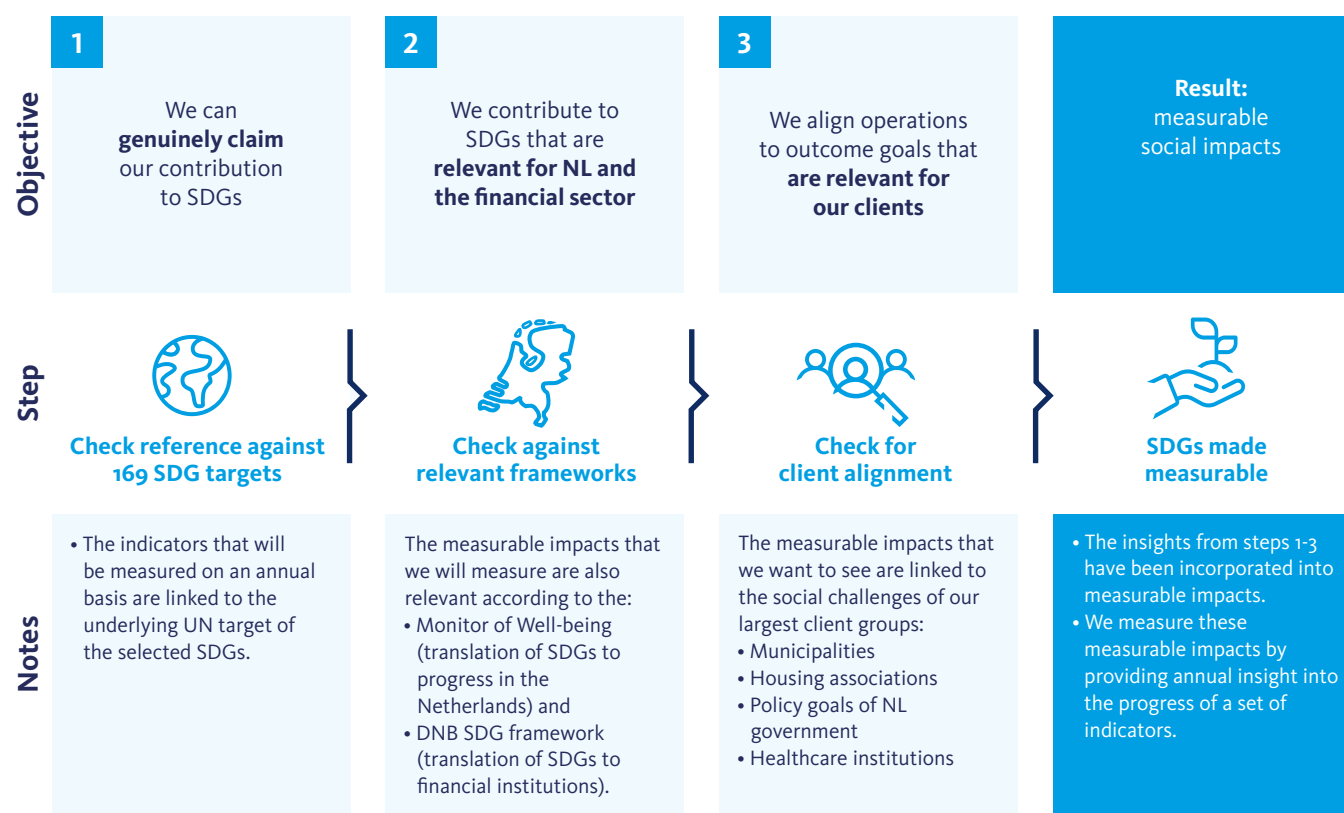
- SDG 3: *Good health and well-being*
- SDG 4: *Quality education*
- SDG 7: *Affordable and clean energy*
- SDG 11: *Sustainable cities and communities*
- SDG 13: *Climate action*

The targets underlying these SDGs are defined and they underpinned the design and implementation of the impact framework for BNG Bank.

### Steps taken

To implement the impact framework, we took the following three steps to achieve measurable social impacts:

- 1) a check against the 169 SDG targets
- 2) a check against relevant frameworks such as the Monitor of Well-being (Monitor Brede Welvaart) and the SDG Impact report by the Sustainable Finance Platform chaired by the Dutch Central Bank DNB (see 1 and 2 in list of references in the appendix)
- 3) a check for alignment with BNG Bank's clients. See Figure 1 below for an overview of the steps taken.



**Figure 1: Action plan to produce measurable social impacts**

We verified the reference against SDG targets by assessing the extent to which the targets underlying the 5 selected SDGs match the outcome targets developed by BNG Bank. Only a limited number were suitable for this. This is shown in Figure 2.

Bank has drawn up outcome targets (BNG contributes to) and matched them with SDG targets and translated them into social impacts.






	BNG contributes to	Description of SDG target	Measurable social impacts
	<b>Health protection and accessible healthcare</b>	<b>3.9</b> Reduce number of deaths and illnesses from air contamination	<b>IMPROVE AIR QUALITY</b>
		<b>3.8</b> Access to high-quality, essential healthcare services	<b>HOSPITAL DISTANCES</b>
	<b>Good education facilities</b>	<b>4a.</b> Building and improving education facilities	<b>UPGRADE OR RENEW EDUCATIONAL BUILDINGS</b>
	<b>Increase energy efficiency</b>	<b>7.3</b> By 2030, double the global rate of improvement in energy efficiency	<b>DECREASE IN ENERGY CONSUMPTION OF RENTAL HOUSING HOMES, EDUCATIONAL AND HEALTHCARE BUILDINGS</b>
	<b>Increased share of renewable energy in the energy mix</b>	<b>7.2</b> By 2030, increase substantially the share of renewable energy in the global energy mix	<b>INCREASE NUMBER OF HOUSEHOLDS THAT USE RENEWABLE ENERGY</b>
	<b>Available and affordable rental housing</b>	<b>11.1</b> By 2030, ensure access for all to affordable housing	<b>INCREASE IN AVAILABLE OWNER-OCCUPIED HOMES AND RENTAL HOUSING</b>
			<b>INCREASE IN AFFORDABLE RENTAL HOUSING</b>
	<b>Liveable neighbourhoods</b>	<b>11.1</b> By 2030, provide access to sustainable transport systems	<b>INCREASE OF SUSTAINABLE PUBLIC TRANSPORT</b>
		<b>11.6</b> By 2030, manage adverse environmental impact	<b>DECREASE MUNICIPAL WASTE</b>
		<b>11.7</b> By 2030, ensure access for all to green and public spaces	<b>INCREASE IN PUBLIC GREEN SPACES</b>
	<b>Climate mitigation</b>	<b>13.1</b> Integrate climate change measures into national policies, strategies and planning	<b>DECREASE IN GREENHOUSE GAS EMISSIONS</b>



Figure 2: Match Outcome targets of BNG Bank with SDG target and the translation into social impacts.

The four principal client groups of BNG Bank were also identified for the purpose of calculating social impact: municipalities, housing associations, educational institutions and healthcare institutions. As the share of municipalities and housing associations within BNG Bank's (2020 and 2021) balance sheet is 81%, extensive consideration was given to the associations' plans (see list of references) of and/or discussions were held with the Association of Netherlands Municipalities (VNG) and Aedes, the association of housing corporations.

### **Outcomes: the social impact of the client**

In order to ascertain clearly whether an impact can be produced on the 5 SDGs, the 5 SDGs were translated into formulated 'outcome targets'. *outcome* targets are used to clarify how social impact is produced through the clients financed by BNG Bank. See Figure 2 in the preceding section for an overview of the *outcome* targets

BNG Bank will align operations to these different *outcome* targets. BNG Bank mainly provides balance sheet financing, and with this type of financing, it is ultimately the client that produces the social impact. The bank mainly aims to deploy the tool of *engagement* with clients to influence their social impact. By *engagement* we mean the way in which BNG Bank engages clients in discussion on social themes. These themes are described in the following chapter. The *engagement* strategy is currently being developed for each client group in a separate document. No direct connection is made in this methodology between the measurable impact that clients create and the *engagement* activities that BNG Bank undertakes.

The demarcation of the methodology described in this document is focused on determining progress on the *outcomes*, i.e. progress on social impact of BNG Bank's clients. To measure progress on this, indicators have been defined that will be used for a first baseline measurement in 2021. The next chapter explains what those indicators are, by which client group these can be influenced and how progress on those indicators will be measured.

## Determining relevant indicators

This chapter describes, for each SDG, which steps were taken to select relevant indicators on which BNG Bank will report annually as from 2021. This starts with the formulated *outcome* targets (see previous chapter), the SDG targets and BNG Bank's material client groups.

### Data availability is an important enabling condition

An important enabling condition for the indicators is that the underlying data for an indicator must be available in public sources (including CBS microdata). The underlying reason for this is to safeguard continuity and independence as well as to ensure that the data are recognisable for clients. The disadvantage is that the public data underlying the indicators are not always measured annually. The challenge remains to monitor availability carefully and not allow years to vary too much for a measurement. We will therefore evaluate this properly for the new measurement.

Besides this document that describes the methodology for calculating impact, a Reporting Manual will also be drawn up by Het PON & Telos, the data provider for the baseline measurement. This will describe in detail how the indicator is produced, where the data come from and what safeguards/process controls are applied to safeguard reliability, consistency, etc.

### Attributing to the client

For the baseline measurement, the indicators are attributed to the client. For the indicators relating to CO<sub>2</sub> emissions, we align with the PCAF methodology based on attribution, whereby the part of emissions has been converted into the actual financing of the client.

### Align operations to indicators via central KPI

The selected indicators are not treated as Key Performance Indicators, or KPIs. BNG Bank has one central KPI, which is: 10% impact in 2023 compared with 2021. This is a composite KPI (see Principles section).

## SDG 3: Good health and well-being

**Outcome target: With its clients, BNG Bank aims to contribute to health protection via:**

### > Improving air quality

This outcome target refers to SDG target 3.9: 'By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and **air, water and soil pollution and contamination**<sup>1</sup>.

Improving air quality is a key theme for BNG Bank's client group Municipalities. Clean air is a key general necessity of life. High fine particle concentrations in the air can lead to serious health issues. Measures to improve this issue remain important. While the general air quality in the Netherlands has improved and is moving slightly more towards the SDG target (see page 169 of Monitor of Well-being 2020), discussions on nitrogen continue unabated.

Indicators 2021 – 2024 for air quality to be measured:

- Nitrogen dioxide emissions in kg
- Fine particle emissions (PM2.5) in kg
- Fine particle emissions (PM10) in kg
- NMVOC emissions

**Outcome target: With its clients, BNG Bank aims to contribute to accessible healthcare via:**

### > Hospital distances

This outcome target refers to the following SDG target 3.8: '*Achieve universal health coverage, including financial risk protection, **access to quality essential healthcare services** and access to safe, effective, qualitative and affordable essential medicines and vaccines for all*'.

For the healthcare institutions that are BNG Bank clients, it is crucial that a well-functioning healthcare system is maintained, especially in a society that is constantly changing and in which the ageing population is increasing. Various factors justify the need to keep healthcare accessible to all age groups. Due to the current ageing population, this is particularly important for the elderly. The mobility restrictions of the elderly are a factor that must be taken into account. Older people are less mobile, and it may therefore be difficult for them to travel long distances to healthcare institutions. Older people have specific wishes for their living environment. They prefer a neighbourhood in which they not only have the GP nearby (< 1 km), but also other essential care services, such as the physiotherapist and a hospital (< 5km). This contributes to their sense of comfort, safety and, most importantly, easy access to care.

Indicators to be measured 2021 – 2024 pertaining to this topic are:

- Average distances of hospitals

<sup>1</sup> Reliable public data on hazardous chemicals, water and soil quality are not yet available at present. We will add these as soon as they are available.

## SDG 4: Quality education

**Outcome target: With its clients, BNG Bank aims to contribute to:**

### > Upgrading or renovating educational buildings

This outcome target refers to the SDG target 4.a: **'Build and upgrade<sup>2</sup> education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.'**

Upgrading and renewing educational buildings is a major challenge for both municipalities and the educational institutions that BNG Bank finances. Municipalities are responsible for the accommodation of schools in primary education, secondary education and special education. Each year, they receive a contribution from the Municipal Fund to finance this. Universities and institutions in (higher) vocational education and adult education are themselves responsible for their accommodation. They do receive funds from the government to maintain their accommodation.

The [report, prepared by McKinsey \(2020\)](#) reveals that an under-investment in accommodation for education has arisen in the Netherlands. Following the financial crisis in 2009, the funding for education was not adjusted. Municipalities' expenditure on accommodation for education is still comparable to that in 2009, but owing to higher quality requirements (enforcement and implementation of the Buildings Decree (Bouwbesluit)), sustainability improvement efforts in connection with the Dutch Climate Agreement and the increased construction costs, that amount equates to fewer new buildings built. In addition, the expenditure of PE (primary education) boards on accommodation has also increased; this is a direct consequence of the fact that responsibility for exterior maintenance of school buildings has been shifted from municipalities to school boards.

Schools therefore face a huge challenge in maintaining or renewing their buildings. As partner of its clients in education, BNG Bank wants to provide support on this social challenge. The engagement strategy elaborates how.

Indicator 2021 – 2024 for upgrading of educational buildings to be measured:

- Amount of investment in buildings and grounds

## SDG 7: Affordable and sustainable energy

**Outcome target: Via its clients, BNG Bank aims to increase energy efficiency through:**

### > Decrease in energy consumption of rental housing, educational and healthcare buildings

The outcome target refers to the SDG target 7.3: **'By 2030, double the global rate of improvement in energy efficiency'**

These SDGs are relevant for all of BNG Bank's client groups, and particularly for housing associations, healthcare and educational institutions. The current energy supply in the Netherlands is still largely based on fossil fuel combustion. There is a trend reversal within total energy consumption from green to grey. The Netherlands occupies a place in the rearguard compared with other EU countries, the [2020 Monitor Brede Welvaart](#) (page 173).

Housing associations have been assigned an important role in implementing [the Dutch Climate Agreement](#), one of the major challenges of which lies in improving the sustainability of housing stock and, in particular, making it gas-free and ensuring that residents reduce their energy consumption.

It was agreed in the [Covenant on Energy Savings in the Rented Housing Sector](#) (Covenant Energiebesparing Huursector) of 28 June 2012 that the housing association sector would aim to improve the sustainability of rented accommodation to, on average, energy label B by 2020 at a sector level.

The Dutch Climate Agreement furthermore includes the ambition to make public real estate low in CO<sub>2</sub> by 2050. That entails an important role for municipalities, healthcare and educational institutions in reducing the electricity consumption of their buildings.

In order to demonstrate impact, it is important to report on the changes occurring in sourcing electricity: green electricity from various sources. However, because no public data are available on this at present, we have decided to include electricity consumption anyway, even if this may rise as homes and buildings are taken off the gas grid. That enables us to separately monitor developments in natural gas consumption and electricity consumption.

<sup>2</sup> Unfortunately, reliable public data on upgrading of educational buildings are not available, but hugely material for BNG Bank. We will add an indicator as soon as the data are available.



Indicators 2021 – 2024 to be measured:

*Housing association dwellings*

- Electricity consumption (TWh) of housing association dwellings
- Gas consumption (M3) of housing association dwellings

*Educational institutions*

- Electricity consumption (MWh) of educational institutions
- Gas consumption (M3) of educational institutions

*Healthcare institutions*

- Electricity consumption (MWh) of healthcare institutions
- Gas consumption (M3) of healthcare institutions

**Outcome target: Via its clients, BNG Bank aims to contribute to a larger share of renewable energy in the energy mix**

- > **Increase in number of households that use renewable energy**

The outcome target refers to SDG target 7.2: 'By 2030, increase substantially the share of **renewable energy** in the global energy mix'.

The current energy supply in the Netherlands is still largely based on fossil fuel combustion. Unfortunately, there is a trend reversal within total energy consumption from green to grey. The Netherlands occupies a place in the rearguard compared with other EU countries, according to the Monitor Brede Welvaart (page 172).

This SDG target is relevant mainly for our largest client groups: municipalities and housing associations. Municipalities have no direct influence on their inhabitants' use of sustainable energy, but they can devise incentives, such as setting up collective purchasing initiatives, offering energy loans or assisting businesses, institutions and owners' associations in getting started on solar energy. Housing associations can help maintain their tenants' energy bills at affordable levels by providing sustainable energy alternatives.

Indicator 2021 – 2024 to be measured:

- Renewable energy generated in municipalities portfolio
- Renewable heat generated in municipalities portfolio
- Renewable electricity (TWh) generated in municipalities portfolio
- WP solar power capacity in municipal portfolio

## SDG 11: Sustainable cities and communities

**Outcome target: Via its clients, BNG Bank aims to increase the number of available and affordable rented homes via:**

- > **Increase in available rental housing**
- > **Increase in affordability of rental housing**

This outcome target refers to SDG target 11.1: 'By 2030, ensure **access** for all to adequate, safe and **affordable housing**'

These topics are relevant for the housing associations that BNG Bank finances. According to the Monitor Brede Welvaart (page 194), the affordability of homes in the Netherlands is under pressure, the price development of rental housing has increased and is therefore trending upwards. The number of available rented homes has edged up in the past few years.

Nonetheless, the report by Aedes has revealed that housing stock is decreasing. That is because the number of houses that is demolished or sold exceeds, on an aggregated basis over several years, the number that is added (new construction and purchases). In addition, part of the housing stock is being sold off by housing associations.

Indicators 2021 – 2024 of all housing associations in BNG Bank's portfolio to be measured:

- Housing stock purchase and rent in municipalities portfolio
- Number of allocations within income limits
- Social housing supply in housing associations portfolio
- % of affordable rental housing in housing associations portfolio

**Outcome target: With its municipality clients, BNG Bank aims to create liveable neighbourhoods by:**

- > **Decrease in municipal waste**
- > **Increase in sustainable public transport**
- > **Increase in public green spaces**

This outcome target refers to the following SDG targets:

- SDG target 11.7 'By 2030, provide universal access to safe, inclusive and **accessible, green and public spaces**'
- SDG target 11.6 'By 2030, reduce the **adverse per capita environmental impact of cities**, including by paying special attention to **air quality**<sup>3</sup> and **municipal and other waste management**'
- SDG target 11.2 'By 2030, provide access to safe, affordable, accessible and **sustainable transport systems**'

<sup>3</sup> We already cover air quality under SDG 3, see section 1 in this chapter

SDG 11 does not just concern housing (see outcome target and SDG target 11.1), but also the surroundings in which people reside and live. The SDG is aimed at making the local living environment safe, affordable, accessible and sustainable. There is substantial pressure on the living environment and available space. That is precisely the challenge for our largest client group: municipalities. As BNG Bank, we want to be an ally in the challenges facing municipalities.

Reducing waste is an important topic that we want to highlight here. Compared with other EU countries, the Netherlands largely occupies a mid-ranking position or a place towards the bottom of the list, according to the *Monitor of Well-Being* (page 196). A positive development is that waste volumes that municipalities had to collect have declined over the years, and the trend is accordingly green. At a national policy level however, what lies ahead is the very considerable challenge to realise, by 2050, a fully circular economy, and municipalities have an important role to fulfil in stimulating a reduction of households' waste. Unfortunately, there are no data sources available for the amount of waste from businesses and industry.

Sustainable public transport is an important theme within SDG 11. This is also relevant for municipalities, given that they can exert direct influence in this area and given the policy goal to have all new buses operating on 100% renewable energy or fuel by 2025. This is stated in the Administrative Agreement on Zero-Emissions Bus Transport (*Bestuursakkoord Zero Emissie Busvervoer*). From 2030, all buses are required to have zero emissions.

Indicators 2021 – 2024 of all municipalities in BNG Bank portfolio to be measured:

- Collection of municipal residual waste
- Increase in separation rate
- Amount of residual household waste
- Amount of sorted household waste
- Distance to public transport
- % zero-emission buses

## SDG 13: Climate action

**Outcome target: With all its clients, BNG Bank aims to contribute to climate mitigation through:**

### > Reducing greenhouse gases (CO<sub>2</sub> emissions)

This outcome target refers to the following SDG target: “13.2 *'Integrate climate change measures into national policies, strategies and planning'*”.

Climate action is an important topic for BNG Bank, and a few years ago it therefore started reporting on the CO<sub>2</sub> emissions of the credit portfolio on the basis of the PCAF methodology<sup>4</sup>, which has a different calculation approach from the other indicators mentioned in this report. CO<sub>2</sub> emissions are converted to the amount actually financed by BNG Bank (known as ‘attribution’) instead of all emissions of the client, in order to be in line with the Climate Agreement and to prevent double counting. We also take 2020 as the base year here.

Indicators 2020 to be measured:

- CO<sub>2</sub> emissions of municipalities portfolio
- CO<sub>2</sub> emissions of housing associations
- CO<sub>2</sub> emissions of healthcare institutions
- CO<sub>2</sub> emissions of educational institutions

A comprehensive overview of all indicators referred to in this chapter is provided in Appendix 1.

<sup>4</sup> PCAF is short for Partnerships Carbon Accounting Financials, a methodology for calculating CO<sub>2</sub> emissions for financial institutions, also see <https://carbonaccountingfinancials.com/>

## Principles applied in the calculation

We apply a number of principles as a starting point for determining the methodology and calculating whether our clients are achieving progress. Applying these principles entails consequences in the methodology. We discuss this for each principle in the following paragraph.

### Principle 1: We can measure whether we are on-track with our ambition

BNG Bank's ambition is described as 10% impact by 2023. What this means for the methodology is that the difference is apportioned across the years to a percentage of change, for 2023 compared with 2021. We take 2021 as the base year here, because that is the year of the baseline measurement. Converting this into a percentage enables us to depict the trend per indicator. This trend is therefore based on and calculated using different types of indicators.

As described above, these SDGs have been translated into outcomes. We track progress on the outcomes via indicators as described in the preceding chapter. The indicators depict a change percentage for 2023 compared with 2021.

The ambition refers to the impact that is made on all 5 SDGs. We are not aiming for an individual impact per SDG of 10%, but for impact on all 5 SDGs in the aggregate.

### Principle 2: The methodology reflects areas that can be influenced

The methodology is aligned with areas that BNG Bank's clients can influence. This is reflected in two elements:

- 1) The relationship between indicators and client groups
- 2) The relevance of that client at BNG Bank

#### The relationship between indicators and client groups

Some indicators cannot be influenced exclusively by any one client group. An intermediate step is therefore required, a matrix, to state which client groups can influence which indicators. That matrix is provided in Appendix 2. It shows the indicators on the left and the client groups (municipalities, housing associations, healthcare institutions and educational institutions) on the right. It depicts which indicator is applicable to which BNG Bank client group.

#### The relevance of the client at BNG Bank

The second element is the relevance of the client for BNG Bank. We translate this into the relative size of the loans. The client groups covered are: municipalities, housing associations, healthcare institutions and educational institutions. These are the parties that are in scope for us and they represent 86% of lending in the balance sheet. We are therefore provisionally placing the remaining 14% out of the scope of this first version of the methodology. This relates mainly to smaller client groups where we will not conduct any engagement yet. In addition, these largely concern project financing. As direct impact is created through project financing, a different approach is required to determine impact.

The size of a client group is reflected in the weighting methodology. Impact areas where BNG Bank has more clients that, in their turn, can exert greater influence on achieving outcomes will be featured more strongly in the methodology than areas where this applies to a lesser extent to the bank.

This is a simplification of reality, and may be an aspect that can be fine-tuned as the methodology continues to be developed.

The data reflect the bank's portfolio. For example, the indicator 'number of allocations within the income limits' relating to rental housing can be influenced by

housing associations. For this indicator, only the allocations of the housing associations that are clients of BNG Bank will be taken into account.

### Example of detailed implementation of Principle 2

We will then apply a weighting methodology in which the weighting is determined by the type of client that influences the indicator. The greater the amount of lending to this client type (represented in the balance sheet), the greater the weighting will be. Table 1 below shows how we determine the weighting per indicator.

	Housing associations	Municipalities	Healthcare institutions	Educational institutions	Total
Number of indicators	7	16	4	4	31
Total lending (BNG Bank balance sheet)	51%	31%	8%	1%	91%
<b>Weighting per indicator</b>	<b>7.2%</b>	<b>1.8%</b>	<b>1.9%</b>	<b>0.3%</b>	

### Principle 3: We want to be able to start measuring quickly

Since the stated ambition of 10% impact by 2023 has an explicit timeframe, it is important that in 2021 we are able to carry out a baseline measurement. The Reporting Manual provides further details on the availability of the data underlying the indicators, the data source for each indicator and the time period in which the measurement was carried out.

The methodology is only applied after two data points are available: The baseline measurement in 2021 and a measurement carried out in 2022.

### Principle 4: We strive for consistency

We strive for the greatest possible consistency in the methodology for 2021-2023. That allows us as well as our stakeholders to properly understand what the impact percentage reflects. We only depart from the consistency principle in the methodology if there is a clear cause and compelling rationale for doing so.

### Principle 5: In due course, we can revise and expand the methodology

Striving for consistency in the methodology for 2021-2023 does not mean excluding improvements and fine-tuning prompted by evolving insights.

We currently see the following as options for this: **1.** Net positive impact and **2.** Benchmark option: what would the impact have been if we had not conducted engagement? These can provide suitable cues or reasons for modifying this methodology.

## Appendix 1: Overview and description of indicators

SDG	INDICATOR	SHORT DESCRIPTION
3.8	Hospital distance	> Average distance residents must travel to a hospital
3.9	Nitrogen oxide emissions (NOx)	> Total emissions in kilograms of nitrogen oxides (including nitrogen dioxide) per municipality
3.9	Fine particle emissions (PM2.5)	> Total emissions in kilograms of fine particles less than 2.5 microns per municipality
3.9	Fine particle emissions (PM10)	> Total emission in kilograms of fine particles less than 10 microns (incl. less than 2.5 microns) per municipality
3.9	NM VOC emissions	> Total emissions in kilograms of volatile organic compounds (non methane) by municipality
7.2	Total renewable energy (TJ)	> Total renewable energy generated (both heat and electricity) in terajoule per municipality
7.2	Renewable electricity (kwh)	> Total renewable electricity generated in kilowatt-hours per municipality
7.2	Renewable heat (TJ)	> Total renewable heat generated in terajoule per municipality
7.2	Capacity of solar panels per inhabitant	> Total capacity in watt peak per inhabitant of the solar panels installed per municipality
11.1	Number of new-build homes	> Number of new-build homes in the total sector, both buy and rent, per municipality
11.2.	People with access to public transport (num-ber)	> The number of people with access to public transport. Accessible public transport is defined as a bus stop or station within walking distance (within 700m) where a means of public transport stops at least twice an hour on a weekday
11.6	Zero-emission buses	> The percentage of zero-emission buses within the entire bus fleet of the concession areas
11.6	Increase in separation rate	> Percentage of household separated waste, such as garden waste, waste paper and cardboard, glass, textiles and household hazardous waste, in kilograms per municipality
11.6	Collection of municipal residual waste	> Total collection of municipal residual waste in kilograms per municipality
13.2	CO <sub>2</sub> emissions of municipalities	> Total calculated emissions in CO <sub>2</sub> equivalent for municipalities
4a	Investments in educational buildings and grounds	> Investments that educational institutions have made in the year in question in both buildings and grounds
13.2	CO <sub>2</sub> emissions of educational institutions	> Total calculated emissions in CO <sub>2</sub> equivalent for educational institutions
7.3	Electricity consumption of educational institutions	> Total (energy) consumption of electricity in kilowatt hours for educational institutions
7.3	Gas consumption of educational institutions	> Total (energy) consumption of gas in cubic meters for educational institutions
7.3	Electricity consumption of housing association dwellings	> Total (energy) consumption of electricity in kilowatt hours for housing association dwellings
7.3	Gas consumption of housing association dwellings	> Total (energy) consumption of gas in cubic metres for housing association dwellings
7.2	Solar panels on social rented housing	> The share of social rented housing within the housing association with solar panels on the roof
11.1	Affordable rented social housing	> The percentage of social rental housing up to the capping limit within the supply becoming available

SDG	INDICATOR	SHORT DESCRIPTION
11.1	Number of new-build homes for social rent per housing association.	> Number of new-build homes in the social rental sector
11.1	Investment costs for housing associations in developments maintenance, quality of life and improvements	> Provide access to adequate, safe and affordable housing and basic services for all by 2030, and improve slums.
7.3	Energy performance of housing associations	> Energy consumption performance per square metre for housing associations
13.2	CO <sub>2</sub> emissions from housing associations	> Total calculated emissions in CO <sub>2</sub> equivalent for housing associations
7.3	Energy consumption of healthcare institutions - electricity	> Total (energy) consumption of electricity in kilowatt hours for healthcare institutions
7.3	Energy consumption of healthcare institutions - gas	> Total (energy) consumption of gas in cubic metres for healthcare institutions
13.2	CO <sub>2</sub> emissions of healthcare institutions	> Total calculated emissions in CO <sub>2</sub> equivalent for healthcare institutions

## Appendix 2: Overview of indicators in relation to SDG targets

IMPACT		OUTCOME		
SDG	SDG	OUTCOME TARGETS	BNG CONTRIBUTES TO:	INDICATORS
3	3.9	Health protection	Improving air quality	<ul style="list-style-type: none"> <li>&gt; Nitrogen dioxide emissions in kg</li> <li>&gt; Fine particles emissions (PM2.5) in kg</li> <li>&gt; Fine particle emissions (PM10) in kg</li> <li>&gt; NMVOC emissions in kg</li> </ul>
	3.8	Accessible healthcare	Hospital distances	<ul style="list-style-type: none"> <li>&gt; Hospital distances</li> </ul>
4	4a	Good education facilities	Upgrade or renew educational buildings	<ul style="list-style-type: none"> <li>&gt; Amount of investment in buildings and grounds</li> </ul>
7	7.3	Increasing energy efficiency	Decrease in energy consumption of rental housing, educational and healthcare buildings	<ul style="list-style-type: none"> <li>&gt; Electricity consumption (TWh) of housing association dwellings in portfolio</li> <li>&gt; Electricity consumption (MWh) of healthcare institutions</li> <li>&gt; Electricity consumption (MWh) of educational institutions</li> <li>&gt; Gas consumption (M3) of educational institutions</li> <li>&gt; Gas consumption (M3) of healthcare institutions</li> <li>&gt; Gas consumption (M3) of housing associations in portfolio</li> </ul>
	7.2	Increased share of renewable energy in the energy mix	Increase in number of households using renewable energy	<ul style="list-style-type: none"> <li>&gt; renewable energy generated in municipalities portfolio</li> <li>&gt; renewable heat generated in municipalities portfolio</li> <li>&gt; renewable electricity generated in municipalities portfolio</li> <li>&gt; solar power capacity per inhabitant in municipalities portfolio</li> </ul>
11	11.1	Availability and affordability of homes	Increase in availability of social rented housing	<ul style="list-style-type: none"> <li>&gt; Housing stock purchase and rent in municipalities portfolio</li> <li>&gt; Social housing in housing association portfolio</li> <li>&gt; allocations within income limits</li> <li>&gt; new-build social rent in housing associations portfolio</li> <li>&gt; affordable rental housing in housing associations portfolio</li> <li>&gt; Investment costs of housing associations in developments, maintenance and improvements</li> </ul>
	11.6	Liveable neighbourhoods	Decrease in municipal waste	<ul style="list-style-type: none"> <li>&gt; Collection of municipal residual waste</li> <li>&gt; Increase in separation rate</li> </ul>
	11.2		Access to public transport	<ul style="list-style-type: none"> <li>&gt; Distance to public transport</li> </ul>
			Increase in sustainable public transport	<ul style="list-style-type: none"> <li>&gt; % zero-emission buses</li> </ul>
13	13.2	Climate mitigation	Decrease in CO <sub>2</sub> emissions	<ul style="list-style-type: none"> <li>&gt; CO<sub>2</sub> emissions of municipalities portfolio</li> <li>&gt; CO<sub>2</sub> emissions of housing associations</li> <li>&gt; CO<sub>2</sub> emissions of educational institutions</li> <li>&gt; CO<sub>2</sub> emissions of healthcare institutions</li> </ul>

### Appendix 3: Matrix – client groups plotted by indicators

INDICATORS	HOUSING ASSOCIATION	MUNICIPALITY	HEALTHCARE INSTITUTION	EDUCATIONAL INSTITUTION
Nitrogen dioxide emissions		●		
Fine particle emissions PM2.5		●		
Fine particle emissions PM10		●		
NMVOC emissions		●		
Hospital distances			●	
Amount of investment in buildings and grounds by educational institutions in portfolio				●
Electricity consumption (TWh) of housing association dwellings in portfolio	●			
Electricity consumption (MWh) of healthcare institutions in portfolio		●		
Electricity consumption (MWh) of educational institutions in portfolio				●
Gas consumption (M3) of healthcare institutions in portfolio				●
Gas consumption (M3) of educational institutions in portfolio				●
Gas consumption (M3) of housing associations in portfolio	●			
Renewable energy generated (TJ) in municipalities portfolio		●		
Renewable heat generated (TJ) in municipalities portfolio		●		
Renewable electricity generated (TWh) in municipalities portfolio		●		
Solar power capacity (TWh) in municipalities portfolio		●		
Housing stock purchase and rent in municipalities portfolio		●		
Housing supply social housing in housing association portfolio		●		
% affordable rental housing in housing associations portfolio	●			
Number of allocations within income limits	●			
Number of new-build social rental housing in housing associations portfolio	●			
Collection of municipal residual waste		●		
Increase in separation rate		●		



INDICATORS	HOUSING ASSOCIATION	MUNICIPALITY	HEALTHCARE INSTITUTION	EDUCATIONAL INSTITUTION
Distance to public transport		●		
% zero-emission buses		●		
CO <sub>2</sub> emissions of municipalities portfolio		●		
CO <sub>2</sub> emissions of housing associations	●			
CO <sub>2</sub> emissions of educational institutions				●
CO <sub>2</sub> emissions of healthcare institutions			●	

## Appendix 4: Validation of methodology

Internal / External	Who	Discussed
External	Expert meeting (participants including ABN Amro Bank, ASN Bank, NVB, Ministry of Foreign Affairs, PGGM, RSM / Sustainable Finance Lab, Dutch Green Building Council).	Testing the methodology with subject-matter experts, during which strengths, weaknesses, opportunities and risks were discussed.
External	Albert Jan Knol (PWC – Senior Manager Audit & Assurance / ESG)	Careful documentation of talks with clients, use of a fixed format and drawing up client strategy is important.
External	Albert Jan Knol (PWC – Senior Manager Audit & Assurance / ESG), Mylene Goei (PWC – Manager ESG Reporting & Assurance)	Consistency in methodology is valued, but can be departed from if justifiable. Selection of indicators and resulting approach applied so far considered to be diligent and sound by PWC.
External	Het PON & Telos	Excel reviewed
Internal	Olivier Labe (CFO)	Received mark-up by PWC of Methodology report
Internal	Advisory Committee on Sustainability	Full methodology discussed
Internal	Mattijs Moerenhout (risk manager)	Full methodology presented
Internal	Executive Committee	Full methodology discussed
Internal	Supervisory Board	Full methodology presented

## List of references

- > Betaalbare woningen – beleidsagenda 2020-2023 Aedes (Affordable housing - 2020-2023 policy agenda)
- > Voldoende passende woningen – beleidsagenda 2020-2023 Aedes (Sufficient appropriate housing - 2020-2023 policy agenda)
- > Duurzame huurwoningen – beleidsagenda 2020-2023 Aedes (Sustainable rental housing - 2020-2023 policy agenda)
- > Green Deal Zorg 2018 (Green Deal for Healthcare)
- > Een versterkt fundament voor iedereen McKinsey, 2020 (A reinforced foundation for all)
- > het Klimaatakkoord (The Dutch Climate Agreement), 2017
- > Convenant Energiebesparing Huursector 2012 (Covenant on Energy Savings in Rental Sector)
- > Betere prestaties & grote uitdagingen: rapportage Aedes-benchmark 2019 (Better performance & major challenges: report Aedes benchmark)
- > Bestuursakkoord Zero Emissie Busvervoer (Administrative Agreement on Zero-Emission Bus Transport)
- > Klimaatcommitment financiële sector (Financial sector's climate commitment)



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