



# European Construction Sector Observatory

Policy measure fact sheet

## The Netherlands

Block-by-Block (Blok voor Blok)

Thematic Objectives 1, 3 & 4

February 2018



# In a nutshell

<b>Implementing body:</b>	Ministry of the Interior and Kingdom Relations (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties – BZK)
<b>Key features &amp; objectives:</b>	Fourteen projects featuring consortia of market participants cooperating locally to develop large-scale energy saving measures to upgrade existing residential buildings in the Netherlands. The aim is to encourage owner-occupiers and landlords to take energy-saving measures with an attractive range of measures and ultimately to encourage the market to operate independently.
<b>Implementation date:</b>	6 June 2011 (14 constituent projects ran from 2012 to 2014)
<b>Targeted beneficiaries:</b>	Households
<b>Targeted sub-sectors:</b>	Residential, Energy services
<b>Budget (EUR):</b>	5.75 million (350,000-500,000 per project)

There are 7.4 million homes in The Netherlands, of which 4.4 million (60%) are owner-occupied, 2.3 million are homes provided at social rent, and 0.6 million (8%) are privately rented<sup>1</sup>. According to its Third National Energy Efficiency Action Plan (NEEAP), the Dutch Government is aiming to reduce energy consumption in the built environment (residential and non-residential) by 122 Petajoules (PJ) by 2020. Dutch buildings consume about 35% of the country's total energy consumption. As a result, buildings are a clear priority target for energy saving measures.

The Government's response to the energy saving challenge in recent years, in terms of the residential sector, has been to push and support initiatives with the potential to deliver large scale energy efficiency upgrades to the existing housing stock as a means of achieving significant reductions in residential

energy consumption. Some key examples are the Energy Leap (Energiesprong) initiative, zero-energy housing projects and the Zero-Energy Regions Programme<sup>2</sup>.

Block by Block was created by the Ministry in order to increase the speed and scale of energy-efficiency improvements in existing buildings across the country.

Another important and more recent initiative is Block by Block (Blok voor Blok), which was launched by the Ministry of the Interior and Kingdom Relations (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties – BZK) in 2012. Block by Block was created by the Ministry in order to increase the speed and scale of energy-efficiency improvements in existing buildings across the country. The purpose was to test the feasibility of market-led approaches as a means of delivering large scale improvement programmes, to identify barriers and solutions, encourage knowledge sharing, and create valuable learning experiences that could be taken forward to inform future policies and programmes.

Block by Block had a budget of EUR 5.75 million and encompassed fourteen separate projects that brought together local stakeholders to improve energy efficiency in a local area (at least 1,500-2,000 residential buildings per project). Overall, Block by Block aimed to deliver energy savings in at least 23,500 residential buildings.

By the end of 2014, Block by Block projects had implemented energy efficiency improvements in about 20,000 residential buildings, which is an 85% success rate. As a measure of its success, the experience and results achieved by the Block by Block initiative subsequently led to a proposal for new follow up initiatives, such as the large-scale 'Rapid Owner-Occupied Housing (De Stroomversnelling Koopwoningen) Project'.

## 1

# General description

The Dutch Ministry of the Interior and Kingdom Relations (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties – BZK) launched the Block by Block (Blok voor Blok) initiative on 6 June 2011.

The goal was to explore ways to deliver large-scale energy efficient upgrades to the existing housing stock and create valuable learning experiences. The aim was to assess the feasibility of using a market-based approach to achieve major energy efficiencies in existing housing and to encourage homeowners to make their properties more energy efficient<sup>3</sup>.

Block by Block invited consortia of at least three market parties to submit proposals for the delivery of large-scale energy saving renovation work on a minimum of 1,500 to 2,000 existing residential buildings per project. Table 1 lists the fourteen Block by Block projects that were implemented between 2012 and 2014.

Block by Block was funded by the BZK and had a total budget of EUR 5.75 million, which provided between EUR 350,000 and EUR 500,000 per project. This non-refundable grant funding was provided by the BZK on a project by project basis, meaning that it was variable according to the aims of each project, which each project was required to agree with the BZK. The BZK stipulated that the funding provided to each project was designated to go towards a project's organisational and process costs. Projects were not permitted to spend it on energy saving measures themselves<sup>4</sup>.

The energy efficiency goal for all renovation work was to increase each home's energy efficiency rating by at least 2 Energy Labels, in accordance with the Energy Performance of Buildings Directive and the Energy Labelling System (G to A, where A is the most energy efficient) and/or by achieving Energy Label B<sup>5</sup>.

Beyond that shared aim, each project planned and piloted their own blend of measures to encourage and support the delivery of large-scale renovations, to develop learning experiences and create an independently functioning market<sup>6</sup>.

Some examples of specific project goals include:

- The 'Energy Saving in the Neighbourhood' project in Amersfoort aimed to make 2,000 residential buildings more energy efficient and 20 residential buildings energy neutral within a three-year period<sup>7</sup>;
- The 'Smart Neighbourhood – Energetic Residents' project in Den Bosch aimed to make 2,000 residential buildings more energy efficient and also aimed to make households aware of their energy use through the use of smart meters;
- The '3x3=9' project in Eindhoven, which was implemented by an organisation called 'Neighbourhood by Neighbourhood' aimed to renovate at least 2,000 residential buildings and also aimed to raise public awareness about smart energy efficiency technologies that are available on the market.

Table 1: List of Block by Block projects

Town / Locality	Project Title
Amersfoort	Energy saving in the neighbourhood (Energiebesparing in de Wijk) <a href="http://www.033energie.nl">www.033energie.nl</a>
Amsterdam	Energy Leap Amsterdam (Energiesprong Amsterdam) <a href="http://www.vvegemaakt.nl">www.vvegemaakt.nl</a>
Breda	On the breach for Breda (Op de Bres voor Breda) <a href="http://www.bresbreda.nl">www.bresbreda.nl</a>
Den Bosch	The Smart Neighbourhood – Energetic Residents (De Slimme Buurt - Door Energie van Bewoners) <a href="http://www.enexis.nl">www.enexis.nl</a>
Deventer	Deventer Energetic Connection (Deventer Energieke Verbinding) <a href="http://www.ieder1.nl">www.ieder1.nl</a>
Eindhoven	3 x 3 = 9 <a href="http://www.buurtvoorbuurteindhoven.nl">www.buurtvoorbuurteindhoven.nl</a> *

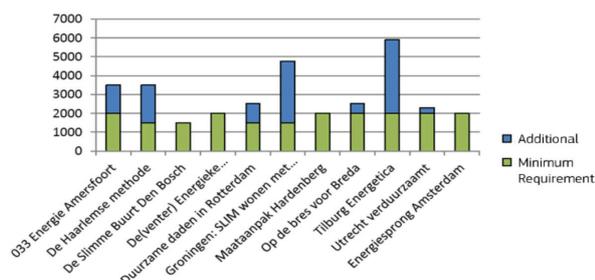
Town / Locality	Project Title
Groningen	Groningen: Smart Living with Energy (Groningen: Slim Wonen met Energie) <a href="http://www.kaw.nl">www.kaw.nl</a>
Haarlem	The Haarlem Method (De Haarlemse Methode) <a href="http://www.alliander.com">www.alliander.com</a>
Hardenberg	Tailor-made Approach for Large-Scale Energy Dedemsvaart-Balkbrug (Maataanpak Grootchalige Energiebesparing Dedemsvaart-Balkbrug) <a href="http://www.syntens.nl">www.syntens.nl</a> *
Overijssel	Overijssel Energy Saving Approach 2.0 (Overijsselse Energiebesparingsaanpak 2.0) <a href="http://www.overijssel.nl/nieuweenergie">www.overijssel.nl/nieuweenergie</a>
Rotterdam	Sustainable Deeds (Duurzame Daden) No website cited
Tilburg	Energy Tilburg (Tilburg Energetica) <a href="http://www.segon.nl">www.segon.nl</a>
Utrecht	Utrecht Preserves (Utrecht Verduurzaamt) <a href="http://www.aefinance.nl">www.aefinance.nl</a>
Ymere	Rapidly Sustainable in Occupied State (Snel Verduurzamen in Bewoonde Staat) <a href="http://www.ymere.nl">www.ymere.nl</a>

\* indicates websites cited, but which are not currently live

Source: Block by Block: Large-scale energy savings in existing buildings<sup>9</sup>

Figure 1 shows the number of dwellings included at the start of each project. Many projects have included a higher target in their project plan that the minimum required by the BZK<sup>9</sup>.

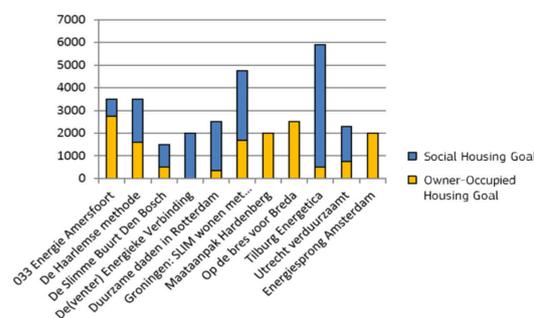
Figure 1: Minimum and additional renovation project targets



Source: Netherlands Enterprise Agency, 2014 – this data only available for 11 out of 14 projects<sup>10</sup>

Figure 2 shows the renovation targets for each project by housing type, including both social rental housing and owner-occupied housing. The figure shows that the projects in Hardenberg and Breda are exclusively focused on owner-occupied residential buildings. The Amsterdam Energy Leap project only focuses on owner-occupied residential buildings within VVEs. The other projects focus on both owner-occupied and rental properties. The project in Deventer initially only wanted to make rental residential buildings energy-efficient. However, the project has changed and now also focuses on owner-occupied residential buildings.

Figure 2: Renovation targets by project and housing type

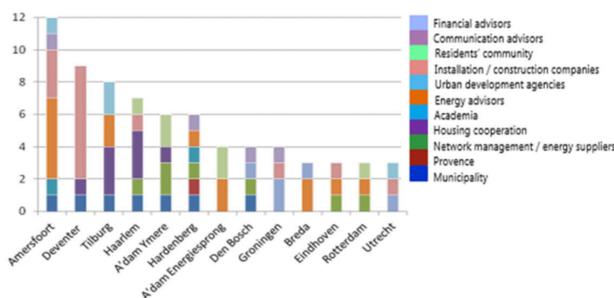


Source: Netherlands Enterprise Agency, 2014 – this data only available for 11 out of 14 projects<sup>11</sup>

Figure 3 conveys the size and composition of each project consortium, which varies considerably from one project to another<sup>12</sup>. Projects involved many different combinations of stakeholders, including specialist advisors (financial, communications, energy), service providers (construction, energy), housing associations, local government, academia and residents. Dutch municipalities, for example, were involved in many Block by Block projects<sup>13</sup>, in which they played an important role by<sup>14</sup>:

- Acting as a bridge between all parties and initiatives;
- Making data available to the public;
- Raising awareness of the project;
- Financing projects.

Figure 3: Consortium size and composition by project



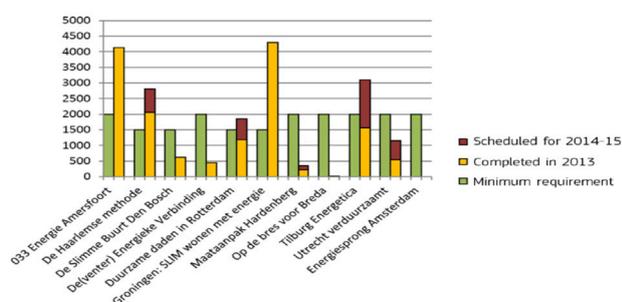
Source: Netherlands Enterprise Agency, 2014 – this data only available for 13 out of 14 projects<sup>15</sup>

## 2

# Achieved or expected results

In June 2014, the Netherlands Enterprise Agency published a report on the findings from the Block by Block initiative. Figure 4 shows the number of residential buildings per project that were made energy efficient by the end of 2013 and those that were scheduled for completion in 2014-15. The green columns indicate the number of residential buildings that each project agreed with the BZK as a minimum delivery requirement.

Figure 4: Renovation results achieved/planned (2013-15)



Source: Netherlands Enterprise Agency, 2014 – this data only available for 11 out of 14 projects<sup>16</sup>

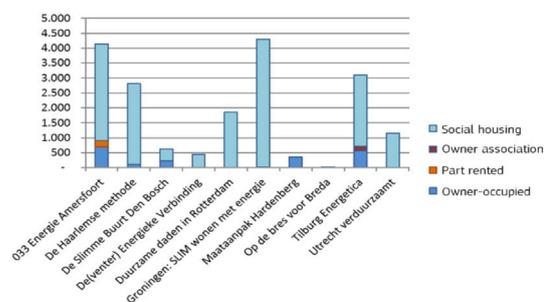
By 1 March 2014, Block by Block projects had implemented energy efficiency improvements in approximately 15,000 residential buildings and reported agreements to deliver further improvements in another 3,700 residential buildings during 2014 and 2015<sup>17</sup>. By the end of 2013, Block by Block projects had achieved a success rate of 64% (15,000), compared to the initiative's overall objective (23,500), and were projected to achieve a success rate of 80% (18,700) in 2014-15, based on planned completions for those years.

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Three projects – Groningen, Amersfoort and Haarlem – had surpassed the quantitative targets they had agreed with the BZK by 1 March 2014. Two projects – Rotterdam and Tilburg – were reported to be on schedule to meet their targets by the end of 2014. At the time of the findings report (June 2014), the remaining projects were reported to be behind schedule in terms of their minimum requirements.

Figure 5 shows the results achieved by each project by housing type. These results are based on all housing renovations that were completed, ongoing and planned at the time of the evaluation report (18,700). The figures show that the vast majority of energy saving renovations were targeted at the social rental sector (87%). Only 11% of the residential buildings targeted were owner-occupied (excluding those owned by owner associations). At the time of the findings report, the Energy Leap Amsterdam project had not implemented any efficiency improvements in buildings and therefore is not included in Figure 5.

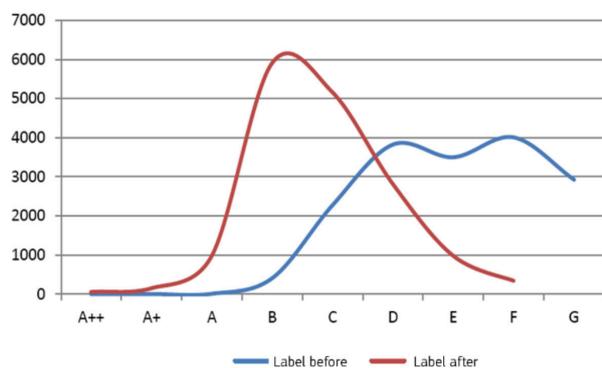
Figure 5: Results achieved by project and housing type



Source: Netherlands Enterprise Agency, 2014 – this data only available for 10 out of 14 projects<sup>18</sup>

Figure 6 provides a before and after snapshot of the energy label ratings of the targeted residential buildings, showing the status before and after Block by Block. This data is based on 63% of the owner-occupied buildings and more than 90% of the social rental buildings. The figure shows that the vast majority of residential buildings (84%) had a lower rated energy label (D, E, F or G) before the Block by Block initiative. Following the implementation of energy efficiency improvements through the Block by Block projects, those residential buildings achieved a 75% (or higher) improvement on their energy label, reaching levels C, B or A<sup>19</sup>.

Figure 6: Improved energy labels for Block by Block housing



Source: Netherlands Enterprise Agency, 2014<sup>20</sup>

As a result of the initiative, 39% of the buildings that were covered by the projects increased their energy label rating by 1 level. A quarter of the buildings increased their energy label rating by 2 levels. 37% had an improvement of 3 levels. The most popular measures were high-yield glass and insulation of roof, facades or floors<sup>21</sup>.

By the end of 2014, Block by Block was evaluated to have been largely successful, having completed energy saving improvements in a total of around 20,000 residential buildings, of which 87% were social rental housing and 11% owner-occupied housing<sup>22</sup>. Privately-owned houses were especially targeted in the Amersfoort, Hardenberg, Den Bosch, Tilburg and Haarlem projects. The end result equates to a completion rate of 85% against the overall target set at the start of initiative (23,500 buildings).

## 3

## Perspectives and lessons learned

From the perspective of Block by Block participating companies, most of the projects were successfully implemented; however, some constraints were also identified by the project coordinator<sup>23</sup>.

One constraint was that new partnership building in the projects was not easy or it took a considerably longer time to build up a relationship of trust between the consortium partners<sup>24</sup>. Good relationships were also established with municipalities, grid operators and energy companies. These relationships were crucial to project success, but they also required a lot of time and coordinate<sup>25</sup>.

Another constraint highlighted was the lengthy preparation phase that was necessary to enable all consortium partners to reach agreements with each other. For some projects, it took from 6 months to a year to reach mutual agreements<sup>26</sup>. Such a time-consuming process delayed implementation of the project activities. The project coordinator also makes the point that cooperation between consortium partners was not always efficient or effective, which resulted in the need to hire external project managers or to change consortium composition and partnerships<sup>27</sup>.

From a Block by Block project perspective, the project manager of the 'On the Breach for Breda' (Op de bress voor Breda) says that it was essential to develop a hybrid marketing model that had a mix of push and pull approach, providing a strong customer focus.

For this reason, a step-by-step plan was developed to persuade local residents to participate in the project and make their homes more energy efficient<sup>28</sup>. The project coordinator also says that different social campaigns helped to increase the interest of communities in the project.

Overall, the Block by Block initiative has attracted a lot of interest from installation and construction companies, munic-

ipalities, energy advisors, urban developers and financial advisors, although there has been little cooperation with brokers in the projects. Individual estate agents also showed relatively low interest in cooperating<sup>29</sup>. According to the project manager, the participation of real estate agents in the project was seen as an important element to raise awareness of the project and attract owner-occupiers to participate in the project. However, they were not able to find any real estate agent who would be willing to be part of a consortium<sup>30</sup>.

From a government perspective, Block by Block has made significant progress in a relatively short time.

The government will continue to promote different measures to meet its energy efficiency targets by 2020<sup>31</sup>. As a result of the successful outcome of the Block by Block initiative, new follow-up projects have been proposed in the Netherlands. One example is the 'Rapid Owner-Occupied Housing (De Stroomversnelling Koopwoningen) Project', which is a large-scale project involving collaboration between more than 100 partners to bring together supply and demand on a very large scale and with great speed for low-energy renovations of private terraced houses from the period 1950-1980<sup>32</sup>. Another example is Energieplein20, which is a new knowledge exchange platform to provide practical information and tools for anyone that wants to achieve energy savings in their homes<sup>33</sup>. The platform provides an opportunity for companies and consumers to network, discuss, collaborate and build new knowledge<sup>34</sup>.

From the perspective of homeowners, participating in the project has helped them to make their homes more energy efficient and has enabled them to reduce their energy costs<sup>35</sup>.

However, homeowners argue that their energy costs have not reduced as much as they wanted or as they were led to believe by project managers<sup>36</sup>. Furthermore, some houses needed to have additional renovation work done; however, after the implementation of the initiative, there was no further funding foreseen<sup>37</sup>.

# Endnotes

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- 5 Duurzaam (2013), Inzet monitoring bij blok voor blok-projecten:  
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- 6 Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland), Block by Block: The Findings (Blok voor Blok: De Bevindingen), Large-scale energy savings in existing housing (Grootschalige energiebesparing in de bestaande woningbouw), 2014:  
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- 7 G. Sauve (2014), Barriers impairing energy-efficient renovation in the Dutch housing sector. University Utrecht.
- 8 Block by Block: Large-scale energy savings in existing buildings (Blok voor blok: Grootschalige energie besparing bestaande bouw):  
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- 12 Ibid
- 13 Duurzaam (2013), Inzet monitoring bij blok voor blok-projecten:  
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- 24 Ibid
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- 27 Feedback provided by Annemarie Huibers-Kessen on 7 February 2018.
- 28 Feedback provided by Op de bress voor Breda project manager on 8 February 2018.
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- 34 Feedback provided by the project manager on 2 February 2018.
- 35 Feedback provided from project coordinator on 6 February 2018.
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- 37 Ibid