☒ Financing & Funding
☒ Construction
☐ Technology
☐ Law & Legislation
☐ Communication
☒ Process support

// Energiesprong (Energy Leap)
Netherlands

Short Description

Energiesprong (former Energy Leap Initiative) is an innovative market development initiative that uses an integrated supply chain approach to develop attractive and viable net-zero energy building retrofit solutions for the mass market by 2020. Retrofits feature rapid implementation and are paid for by savings to energy bills, at no net additional cost to residents.
Targeted sub-sectors: Residential and non-residential building retrofit (supply chains) and energy efficiency

Year // duration

2010 – 2016 (Government-funded scheme)
2017 – ongoing (private sector led)

Objective

The key objectives of Energiesprong are aligned with government objectives of the Innovation Agenda Energy Neutral Built Environment (IAGO). It aims to deliver energy saving solutions to 5,000 building objects, including 2,500 new buildings and 2,500 renovated buildings. It aims to achieve a target of 45% to 80% energy savings in the built environment and energy-neutral new buildings by 2020. Longer-term, it targets a 50% overall reduction. To achieve these goals, the programme works to remove obstacles that block innovation and/or upscaling.

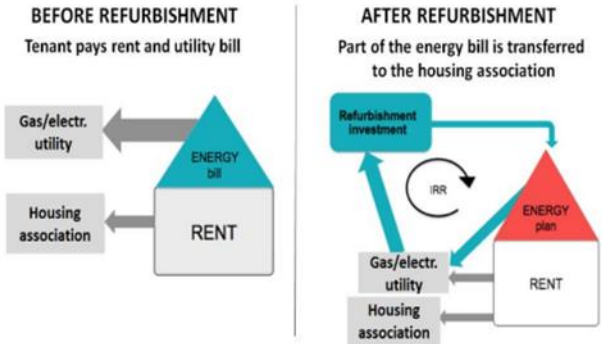
Initial situation

Buildings in the Netherlands account for approximately 35% of the country's total energy consumption. Most Dutch residential and non-residential buildings use natural gas and electricity, almost entirely sourced from fossil fuels, to fulfil their energy needs. Rising energy prices (+85% between 2000 and 2010), the need to reduce the use of fossil fuels and the importance of meeting national energy performance objectives have led the Dutch government to seek innovative solutions that can deliver more energy and cost-efficient buildings, as well as Net Zero Energy (NZE) buildings by 2020.
Energiesprong (Energy Leap) is an innovative market development programme launched in 2010 with a EUR 50 million government funded budget to develop attractive and viable net-zero energy retrofit solutions for the mass market by 2020. This revolutionary approach has real potential to provide affordable market-driven energy saving building retrofits at scale.

Implementation & measures

Under Energiesprong, property owners do not specify a technical solution to retrofit – they specify an energy performance that the retrofit should deliver.
The retrofit process begins with a 3D scan of a building, inside and outside, and the production of a 3D model. This model is the starting point for a single retrofit plan that brings all NZE components together. The retrofit provides an NZE building envelope which typically involves insulated wall cladding, masonry veneer and windows, removal of internal windows, roof replacements complete with insulation and PV arrays, underground insulation where possible, new kitchens and bathrooms, and installation of an energy unit to provide for onsite generation of renewable energy. The retrofit is non-intrusive and can usually be completed within one week and without residents needing to move out. The result is a warm, comfortable and affordable home or building that is modern and attractive with a long-term quality guarantee.
To implement the programme, Platform31 began by bringing together housing associations, contractors and manufacturers to collectively transform neighbourhoods and enhance people's lives by delivering guaranteed 'net zero-energy performance' building retrofits that are implemented without subsidies and are paid for through savings to residents' energy bills. The Energiesprong business or revenue model replaces energy bills with an energy plan.

Figure 1: Energiesprong business/revenue model



Source: Energiesprong

Housing associations provide the upfront capital to pay the building companies that provide the retrofits and then recoup the cost through savings to their tenants' energy bills, with no net additional cost to tenants. The key to the success of this measure is that it appeals to both industry and residents. The retrofits are affordable, quick to implement, long-term performance guaranteed, attractive to both residents and industry, they provide economies of scale, and are paid for through savings to energy bills.

Implementing bodies

2010 – 2016: Dutch Goverment
The initiative was commissioned by the Dutch Ministry of the Interior and Kingdom Relations (BZK) and implemented by Platform31, which is a knowledge-sharing network of organisations committed to urban and regional development.

Beneficiary parties

Initial focus on social housing providers and tenants, construction and retrofit companies and tradespeople. Focus later widened to include non-residential (offices, schools, healthcare) building owners and occupiers; and private home owners (in single and multi-family houses).

Financing // Funding (EUR)

50 million (Government funding: 2010-2016)
6 billion (WSW Social Bank funding for Stroomversnelling (Rapids) deal)
Additional European project funding awarded:
3.6 million (Transition Zero / H2020)
5.4 million (E=O / Interreg NW Europe)

Results

Energiesprong has successfully delivered NZE retrofits to over 2,000 new and existing homes so far, and has agreed a deal to retrofit 111,000 Dutch homes by 2020. Energiesprong is also successful because it provides a win-win model for everyone: the

This project has received funding from the European Union's Horizon 2020 research an innovation programme under grant agreement No 101033878

tenant or owner-occupier has a warm dry home with a new kitchen and bathroom; the owner has a maintenance programme; and the contractor has a new source of income.

Lessons Learned

Energiesprong creates demand and market opportunities for large-scale retrofits of homes, offices, schools and care homes by creating market-driven partnerships between housing providers, building owners, component suppliers (supply chain) and contractors to design and deliver fully integrated whole building energy saving retrofit solutions.
From a Dutch industry perspective, Energiesprong has provided the construction sector with a revolutionary approach and business model that offers both sizeable market opportunities that are attractive to industry (e.g.: retrofit providers) and effective energy saving retrofits that are attractive to clients (e.g.: housing associations) and residents (consumers / end users).
From a resident / tenant perspective, Energiesprong housing retrofits are not only fast and effective but transformational and visually appealing. The prefabricated cladding is not only bolted to the front and rear of the houses on the terraced street with speed and ease, but the residents also note that it has transformed a row of conventional grey houses into attractive modern properties with new solar panelled roofs. Greater awareness of their energy use and the ability to make different choices, such as what kind of appliances to purchase and how best to use them, have also enabled them to adapt their behaviour and become more sustainable energy users.

Multiplication effects

The success of the Energiesprong business model has led to it being exported to international markets. The United Kingdom and France, for example, aim to apply this business model and retrofit about 100,000 homes in the coming years.

Through the Stroomversnelling (Rapids) network, under the Energiesprong banner, market development teams have already been established in the United Kingdom and France. They have brought together a group of suppliers and housing corporations in each market that are committed to deliver NZE retrofits at scale. Energiesprong teams have also been established in Germany, Italy and the US State of New York, and they are currently engaging at an early stage market development work. The first prototypes of buildings in Germany were renovated in Hameln (http://bitly.ws/qCCj).

Need for action

In the future, continued and scaled-up success requires building companies to make significant and time-consuming changes to assimilate different products, a different business model and different people. Long-term success will require home mortgage providers to take home energy performance data into account when assessing mortgage affordability. This would enable providers to differentiate the mortgage loan-to-income (affordability) ratio according to the energy performance of a house. Differentiation would enable house prices, mortgages and energy labels to be correlated. That could mean, for example, that the lower a house's energy label, the lower the loan-to-income ratio.

Source: European Construction Sector Observatory – Policy Factsheet – Netherlands – Energy Leap Initiative

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