The Urban Lab of Europe!

CASE STUDY

REPORT

Democratic Transitions for All

PROJECT

Vilawatt - Innovative local public-private-citizen partnership for energy governance

Viladecans, Spain

TOPIC

Energy Transition

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Vilawatt, Viladecans, Spain

See on UIA website

1. What has the project been about?

The project's context

In Montserratina, a disadvantaged area of the city with a population of about 20,000, roughly a third of the city's 65,000 population, most of the housing was built in the 1970s during a period of rapid migration, before modern building regulations and without adequate building control. The apartments lack insulation, draught-proofing, double glazing, and modern heating systems.

The project's goals and vision

The project's objective was to promote energy efficiency in the city through a series of interlinked actions mostly in Montserratina. The Vilawatt project has four parts which, taken together, provide a comprehensive and transformative set of solutions which are intended to be scaled up across the city over time.

- The conversion of approximately 55 apartment units in Montserratina to be more energy efficient though the installation of double glazing, the addition of roof and wall insulation, and draught-proofing of doors and windows.
- the adoption by the city of a virtual currency: the Vilawatt, to incentivise energy-efficient behaviour among citizens and businesses.
- the development of an energy community among citizens and accompanying actions to educate the population and promote new energy behaviour.
- the creation of energy companies to generate green energy for the use of citizens mostly using public buildings - for instance, roofs for solar PV panels.

The links to Just Transitions

The link to just transitions is twofold. First, the focus is on reducing energy consumption in housing, which directly contributes to reducing CO_2, thereby helping to reduce climate change. Second, the city adopted a participative approach to achieving this goal and explored innovative methodologies, especially by creating a Public, Private, Citizenship Partnership (PPCP) and by the launch of a virtual currency, the '*Vilawatt*', which was used to incentivise energy-efficient behaviour among citizens.

The policy context is that since the launch of the *Vilawatt* project in 2017, the city has sought to develop a comprehensive approach to introducing innovative policies, which the city has termed the 'MIA'. Vildecans is a signatory to the Covenant of Mayors and at the metropolitan level, Barcelona has developed an Energy, Climate Change, and Air Quality Plan which is aligned with Catalonia's regional energy transition pact. Viladecans applied to be one of the EU's 100 climate-neutral cities but was not selected.

The partnership:

Vilawatt is a partnership approach bringing in other agencies and enterprises and aims to co-create solutions with the public. The partnership had nine founding partners several of which were from the private sector. Having private companies involved as partners enabled the project to be implemented more swiftly because it was not necessary to operate a public procurement process for their services.

2. What solutions for Democratic Transitions have been found?

Creative actions adapted to target groups

The city found that they needed to develop specific communication actions and formats each adapted to the different target groups. During the Vilawatt project, numerous creative actions were carried out to engage the public, including: Vilawatt games, Vilawatt songs, Vilawatt contests, and the Vilawatt Ice Cream Cart. The Ice Cart was a specific approach whereby ice cream from a mobile cart was used to engage the public and particularly young people. Viladecans reported that overall, the engagement actions - initially targeting Montserratina - had been successful in bringing a difficult topic of energy conservation into the local debate.

Learning Communities

Vilawatt also established several Learning Communities targeting the public, schools, and entrepreneurs: Vilawatt People's Space, Vilawatt Schools' Space, Vilawatt Professionals' Space. They found that they needed a targeted approach to engage with each type of actor. Segmenting the learning communities enabled different types of discussion to be held with each group. For example, with the professionals group, the discussion was about the different technologies for energy conservation, issues around installing heat pumps and other non-thermal heating systems, the pros and cons of insulation materials in pre-1970 buildings, and so on.

Vilawatt deployed a wide range of techniques to engage with the public at street level. These ranged from the Vilawatt song to the Vilawatt ice cream cart.

The biggest challenge the project faced during implementation was the pandemic. This seriously affected its ability to work with the learning communities, and as a result of the pandemic contact had to cease for the duration of the lockdowns. The work in 2020 was especially badly affected. Despite this, they were able to restart and complete the project once regulations over meeting in public had been eased.

Meeting people at their home

For those in apartments where renovation work was taking place there was direct and frequent contact. This building work was very intensive and numerous problems arose, many more than anticipated because residents were living in their apartments as the work progressed. Close relations through a city outreach officer were needed to keep everyone calm and on board during the works. There had to be close cooperation with contractors.

Getting local businesses on board

The project targeted local businesses to encourage them to join the association representing traders on the PPCP as well as to participate in the currency. They had to be convinced that it was in their interest to participate. The currency was mainly attractive to retail and service businesses, which could hope to increase local sales by participating.

A public-private citizenship partnership for collaborative decision-making

For the ongoing governance of energy efficiency in the city, a public-private citizenship partnership PPCP was established. The PPCP directly involves the community and the private sector. It is structured as a consortium under Spanish law and includes two new associations, one for citizens, and the second for trading businesses. The PPCP is a non-profit body, meets annually and is chaired by the city council.

A PPCP executive body reports to the governance body. This body manages programme implementation, capacity building, and community participation mechanisms, including the operation of the one-stop shop office with five staff. The executive body is configured as a local energy operator or LEO and uses municipal assets such as school roofs for generating solar power. Pilots are underway to generate cheap solar electricity, which is then sold to neighbouring apartments, and which also powers the local school where the panels are based.

The goal of citizen engagement was to form citizen associations to be part of the new PPCP. When the bid was put together and even when the project started there wasn't a participation plan as such. Instead, this was added after approval of the project.

"*We didn't prepare a strategic participatory plan at the beginning. In our application form, we didn't foresee this. So, once we had it clear in our minds that we needed to have a local currency working, we needed to create a PPCP and to have the PPCP, we needed to have two associations, which didn't exist the beginning, they had to be created. And, we didn't have any previous experience in Viladecans with associations linked to energy or the environment*".
Alicia Valle Chief Executive of Viladecans.

The combination of awareness campaigns, and learning and energy communities, leads to change

Changing the level of awareness was based on three different actions: awareness campaigns, learning and energy communities, and the Vilawatt currency.

The project delivered both individual energy advice and awareness campaigns. All of this was led by the PPCP, which had a major role in driving change at the local level. As Alicia Valle said, "Energy efficiency was not a talking point in the city before the VILAWATT project, now everyone is aware of it".

The learning and energy communities were community-based organisations which enrolled citizens and or local businesses in a neighbourhood. They meet monthly with participants. Their role was to promote awareness and knowledge about how to reduce energy consumption and to look at alternatives for heating and cooling such as heat pumps. Six learning communities were established. Awareness campaigns were also run using traditional and new media.

A new local currency adopted citizens and businesses

The third approach was through the Vilawatt, a local complementary currency. Citizens who sign up can be rewarded for saving energy. It was organised through an online banking application called Cyclos with the statute of a digital bank. It has a stable value of one euro and is guaranteed by Spain's central bank. In addition to its role in promoting energy efficiency, the public administration allows the currency to be used in payment of local taxes other charges. It can also be spent at 400 retail and service businesses in the city.

Regulatory hurdles were a major problem for launching the complementary currency and this led to delays. The city gained time and expertise by bringing in a specialist company UBIQUAT, which had expertise in complementary currencies, to pilot the Vilawatt currency through complex national and EU banking rules with minimum delay. UBIQUAT came on board as a partner/shareholder and as a result, there was also no time lost in lengthy public procurement procedures.

The Vilawatt currency's main goal was to promote energy sustainability through reduced emissions. It achieves this through behavioural change as citizens are rewarded for energy savings, and when they spend the currency, they are thinking locally. Businesses that take the currency in payment must meet sustainability criteria. The currency helps to stimulate the local economy because it circulates and has a multiplier effect with the spending remaining in the city. By encouraging local purchasing, it may also reduce transport emissions.

Over the three-year course of the project, Vilawatt traded one million Euros among 5,000 users spending currency with 400 registered businesses. At points during Covid, to keep the local economy moving, the amount paid to local people was doubled. For every Euro used to purchase Vilawatt, the user would be given two units. Although turnover figures are available, no evaluation has been published to help understand the impact of the currency on energy efficiency behaviour.

A rebound effect

Despite the widely viewed success of the project, in the 50 dwellings that were renovated with energy efficiency measures it was found that people did not radically reduce their energy consumption. Instead, most people opted to spend similar amounts on energy as before but were able to achieve higher comfort levels. This finding known as the rebound effect corroborates recent studies elsewhere in Europe.[1]

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[1] https://www.cam.ac.uk/research/news/insulation-only-provides-short-term-reduction-in-household-gas-consumption-study-of-uk-housing

3. What can cities learn from the Vilawatt governance?

Keys to success

The project has had international recognition and was selected by a jury as one of five finalists in the European Commission REGIOSTARS[1] competition in 2020.

- The city's commitment to sharing power through the PPCP governance structure, which involved the community and private sector from the outset, was the key to the success of the project. This was combined with an innovative set of outreach tools to engage with communities on the subject of energy efficiency, which is not always top of people's agendas. This change of mindset within the city grew out of its commitment to the project and has now been generalised across its policy innovations in the city.
- The EU funding from UIA enabled the project to proceed. Without it, and the choice of energy transition as a theme for UIA, there would have been no project. EU leadership on the climate transition has also been important through encouraging cities to be bold in their policy approaches. Viladecans was a candidate for carbon-neutral cities but was not accepted.
- Viladecans has aligned its strategies for energy efficiency with the Catalan Strategy for energy renovation, and the strategies of the Region of Catalonia, the Housing Agency of Catalonia, the Metropolitan area of Barcelona, and the Badia del Vallès city council.

[1] https://www.viladecans.cat/en/vilawatt-project-finalist-european-regiostars-awards

4. Scaling up and replication potential

Most cities in Europe have neighbourhoods with houses that could improve their energy efficiency either with better insulation window replacement or with non-thermal heating systems. This has especially been true since the Russian invasion of Ukraine and the need to reduce gas consumption by installing heat pumps and other alternative forms of heating (biofuels, green hydrogen, etc). There is a huge potential to replicate the approach, however it needs careful adaptation to the local and national circumstances.

Vilawatt was chosen in 2020 to be one of the five pilot URBACT/UIA transfer mechanism networks. The city has worked for over 18 months with Seraing in Belgium, Nagykanizsa in Hungary, and Trikala in Greece. Each city has developed an implementation plan to develop energy efficiency measures along the lines pioneered by Viladecans. The evaluation of the URBACT transfer mechanism is ongoing but partners report that participation has enabled them to move faster in developing their own implementation strategies for energy efficiency.

Resources

See also the video athttps://www.viladecans.cat/en/vilawatt

See on UIA website