The Urban Lab of Europe!

CASE STUDY

REPORT

Making the Transitions Affordable for all

PROJECT

EPIU - Energy Poverty Intelligence Unit

Getafe, Spain

TOPIC

Urban poverty

EDIT 08 DECEMBER 2022

EPIU

See on UIA website

EPIU - Getafe

1. The project description

Energy poverty affects 20 to 25% of Spanish population. It can be defined as 'the inability to adequately heat the home or use the energy needed because the cost is unaffordable. Hidden energy poverty is when households exhibit abnormally low energy expenditures. They may restrict themselves on energy consumption and expenditures, for example. Getafe's Energy Poverty Intelligence Unit (EPIU) project sought to identify and reduce hidden energy poverty in two neighbourhoods, Las Margaritas and Alhóndiga, based on a three-pillar approach.

Pillar 1: A data analytics system

Getafe had no consolidated data because of a lack of cross-departmental working within the city administration and it lacked IT infrastructure. Moreover, many people facing hidden poverty (e.g., unlisted migrants) were invisible. EPIU's first aim was to identify the reality of energy poverty and the needs of vulnerable groups. The aim was to intervene on the home, building and neighbourhood scales (population clusters) using a data analytics system. Along with a survey and data provided by the Red Cross, a socio-demographic analysis was carried out to understand the realities and needs of vulnerable groups. This initial analysis helped EPUI to develop a tool to improve the identification of energy poverty among residents, develop support measures, and put the EPUI data system in place.

Pillar 2: Outreach

Getafe set up a public-facing municipal office for energy improvements: the Healthy Households Office (OHS). The OHS provides a service to support residents in a way that they understand, trust, and without complex technical and bureaucratic language. For residents willing to take up energy efficiency or renewable energy measures, the Office provides support in the form of information & advice and also helps with contractual issues. Its beneficiaries have mostly been people in long-term poverty who are already supported by social services, as well as elderly people whose housing and economic conditions do not allow for real comfort in their homes. Additional focus is being given to residents suffering from power supply cuts and debt issues because of the difficulties of dealing with such extreme debt situations.

Pillar 3: Tailor-made solutions (TMS)

The EPIU is investing in tailor-made solutions for the residents of Getafe. These TMS involve subsidised refurbishment and residents are not required to pay any costs upfront or contract any work themselves. Some TMS are also remarkably simple measures, which can be offered to any resident, regardless of their socio-economic condition and legal status. They may be carried out to the benefit of population clusters at the home, building or neighbourhood scale and may involve soft (behavioural) and/or hard (installations) measures. Examples include energy audits, energy efficiency kits, the use of smart sensors to monitor and reduce energy consumption, supply cut management, and the installation of small and medium-scale passive solutions (thermal paint, curtains, awning, fans). Work on reducing the fiscal burden borne by residents when taking part in public retrofit schemes is also ongoing in the project.

---

2. Getafe and Just and Green Transitions

2.1 What are the implications for Getafe?

Getafe is one of the largest cities in the Madrid city-region. It saw strong economic growth in the 1970s and significant population growth as migrants arrived to work in local factories. This influx led to the rapid construction of new housing, with however low construction standards and low rents. Over 50% of the current housing stock was built before the approval of the first Spanish compulsory regulation on energy efficiency and thermal conditions in buildings, introduced in 1979. So, the main challenge is to refurbish this ageing housing stock to meet today's energy efficiency standards.

In addition, many houses have no heating and the financially vulnerable tend to concentrate in the lowest quality buildings. 20-25% of the population is facing energy poverty. The recent spikes in energy prices will only increase this proportion. Although at city level energy policies do not focus on any specific vulnerable group, the initial analysis of the EPIU project did identify three groups:

- Women, as there is a 'feminisation' of energy poverty in the most deprived communities (single parental families, the shadow economy, and so on).
- The elderly, who are severely affected by energy poverty.
- Migrants, who do not access public subsidies often because they are under the radar of public administrations or because they face barriers (not registered as residents, language, culture, trust, knowledge, etc).

The city of Getafe is striving to reduce energy poverty and increase the use of sustainable energies at the same time. Their approach is to implement social policies (such as the Social Inclusion Plan) and environmental policies, together. By doing so, the city of Getafe hopes to position itself as a leader in local energy policy and delivering on the 2030 Agenda. In addition, the city's Covenant of Mayors' Sustainable Energy Action Plan, drafted in 2014, had already identified a series of needs in the residential sector (awareness raising, boiler improvement, renovation and retrofitting, and energy generation strategies, etc.). The Energy Poverty Advisory Hub will also support the city in further integrating these components, by establishing energy communities in vulnerable neighbourhoods.

2.2 What barriers has Getafe faced implementing the just & green transition?

In Getafe, the shift to more sustainable energy consumption faces a variety of barriers. Many elderly residents have high energy consumption levels because they are used to warm indoor temperatures in winter and cool ones in the summer. Households where residents need specific medical equipment/environments or where many individuals (e.g., migrant families) share a dwelling also display high energy consumption. And the poor energy efficiency of their buildings does little to help residents to control their consumption.

Energy poverty itself also leads to the absence of heating or air conditioning facilities, hook-ups to illegal supply networks, and irregular heating supplies. Difficulty with paying the bills also prevents residents from focusing on their energy transition. Finally, many residents have no access to information and do not know their rights. Addressing these energy poverty dynamics is the core of the EPIU project, which deploys both hard and soft measures to offer residents solutions to their needs (see below).

---

3. How does EPUI promote the just & green transition?

EPIU supports the transition to more sustainable energy consumption by enabling vulnerable groups to take part. It does this by first identifying the needs of those facing hidden energy poverty, and then providing the most suitable solutions, as presented in the introduction. The city already supported the payment of defaulted bills. But EPIU goes a step further by addressing energy poverty not solely as a financial issue, but also as a consequence of the energy technology installed in and energy characteristics of homes and buildings. It achieves this by providing both soft (addressing consumption behaviours) and hard measures (e.g., renovating buildings to make them more energy efficient). These measures are provided by the OHS. EPIU is efficiently combining the local energy transition and local social agendas.

---

4. Keys to success

a. Strong leadership from public authorities

Any project combining both social inclusion and energy transition concerns needs a well-defined and ambitious strategy. In particular, the Mayor of Getafe strongly supports the aim of moving beyond the concept of energy poverty towards a 'right to energy' as a human and fundamental right. With the depletion of fossil resources,

greater demand for energy, high dependence on external suppliers, climate change, and rising energy poverty in recent years, the Mayor of Getafe has come to believe that everyone should have a right to affordable, reliable, renewable and sustainable energy. This vision may have implications for policymakers as it implies changes to regulations, utility bills, etc. And it would make it harder for big companies to profit from poor people.

b. Cross-departmental and collaborative working

Public administration works in silos; this is not news. By getting different departments to work together, the project could progress and develop a better service. The different officers from social services, housing, consumer protection, health and emergency departments all benefitted from the EPIU project, not least as it has been a catalyst to their working closely on these issues, especially through the OHS. The OHS has been both the cause and consequence of collaboration. In addition, a direct referral system between the social services and the energy poverty service turned out to be highly successful in maximising the impact of the support that the local council provides. Robust partnership also contributed to the project bringing in strong IT skills and knowledge of GDPR and social NGOs also played important roles with their knowledge of the target groups.

c. Know who you are working for

Cities need to clearly identify the categories of people they are providing service for, and what their needs are. Only by adopting such a user-centred focus can they design policies that will make a real difference for citizens, both at an individual and building or neighbourhood level. The EPIU project's data analytics system, which combines statistical data from beneficiary surveys conducted by the project managers, feedback from the OHS, and data from Red Cross, enabled the design of an analytical and predictive model to identify vulnerable groups' needs. This in turn led to the design of tailored support - via the OHS - and subsidies for renovation and retrofitting (via the Tailor-made solutions).

d. Combine hard and soft solutions

Although investing in renovation and retrofitting is key, it is not enough to alleviate energy poverty, especially when energy prices are increasingly rising. Getafe has also invested in hard infrastructure by installing small and medium-scale passive solutions. It has also provided support to residents with their consumption and bills (energy audits, energy efficiency kits, use of smart sensors to monitor and reduce energy consumption, supply cut management, etc.). The right type of legal, financial, administrative, and technical support for vulnerable residents is, finally, crucial to ensuring that they can access funding for modern energy-efficient systems.

---

5. Scaling up and replication potential

The data analytics system could be expanded to cover the entire city or even the region. Or it could be applied to other sectors. Other stakeholders could make use of its database. While respecting GDPR, academic institutions could, for example, study the social data included in the model; construction companies could identify energy-inefficient homes and buildings, and energy suppliers could identify homes without energy installations or energy-inefficient buildings. The system's datasets could also inform the design of public policies in the municipality.

Fostering cross-departmental collaboration was a key factor of success. Any project affecting more than one policy area, especially where data analysis is important, would benefit from a collaborative approach: monetary poverty (social services, education, health), unemployment (local economy, social services, education), climate change (environment, adaptation, mobility, energy consumption). The synergies with different city council departments and with associations in the local area, especially through the creation and the work of the OHS, have strengthened the focus in this policy area and have highlighted energy poverty from different approaches and mindsets.

Finally, the TMS selection method was to define a set of measures appropriate for each population cluster. Other cities can learn from the criteria used, which link each tailor-made solution to the variables that define the population cluster they target. At the same time, as some measures are universal, they can usefully be applied independently of a household's or building's specific needs, such as advice on energy habits or bill optimisation.

References

Enerdata, 2020 https://www.enerdata.net/publications/executive-briefing/fuel-poverty.html

EU Energy Poverty Observatory, 2020. Indicators & Data.

https://www.energypoverty.eu/indicators-data

EU Energy Poverty Observatory, 2020. Towards an inclusive energy transition in the European Union: Confronting energy poverty amidst a global crisis. URL https://op.europa.eu/o/opportal-service/download-handler?identifier=4a440cf0-b5f5-11ea-bb7a-01aa75ed71a1&format=pdf&language=en&productionSystem=cellar&part=

Majdandžić, A., Rodik, D., Eppert, M., 2021. PowerPoor-Baseline Assessment Report, Funded by H2020. URL https://powerpoor.eu/sites/default/files/2021-12/D4.2_Baseline%20A_Report%20V1.0.pdf

---