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## Barcelona's energy advice points and the climate emergency

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**"It's not normal to be cold / hot at home." "We're putting all our energy into preventing your electricity supplies from being cut off." You may have seen these slogans on the metro, on the bus, in the street, in the newspaper, in a pamphlet, or on a website in recent years. What's behind these messages? We are introducing a young public service that has been created with the aim of tackling situations of energy-related vulnerability, in order to guarantee our rights in this area, but also to provide global responses from local action to the climate emergency in which we are immersed. This involves challenges and actions from everyday life, with a desire to address a global issue.**

### **EAPs: what are they and what do they do?**

Barcelona's energy advice points have become a point of reference for the city since they were deployed. The energy advice points (EAPs from now on) have been serving all of Barcelona's districts since January 2017 and there are 11 offices distributed throughout the city. This service aims to guarantee energy rights and basic supplies (water, gas and electricity) as well as improve home energy efficiency in Barcelona, especially for the most vulnerable. Every year it promotes the hiring of 20 people finding it difficult to enter the job market to join their permanent staff. These people become part of the formal teams and as energy professionals provide advice in any of the city's 11 EAPs. The service is owned by the municipality and is currently managed by a group of social entities: the UTE ABD-Ecoserveis, responsible for general coordination, and five entities that provide the service in the different parts of the city: ABD-Ecoserveis, Suara, Fundació Surt, Fundació Ciutat i Valors and Fundació Salut i Comunitat.

The service is aimed at all Barcelona's citizens but especially those people who are in a situation of energy poverty and in which some indicator of vulnerability is considered, such as people who suffer from economic and employment difficulties arising from specific or structural long-term unemployment, termination of social benefits or lack of income, people living in homes in poor conditions (poorly insulated, with humidity, leaks, etc.), people in a situation of dependency (elderly people, people with disabilities) or who suffer from some type of socio-sanitary difficulty that requires electrical appliances for the optimal development of their daily lives, and families with dependent children, especially single parents.

The service provides three levels of intervention depending on the tasks to be performed and the professionals who perform them:

- Information and energy rights service or the front office: throughout the city, open to the general public.

- Energy advice service or the back office (personalised and by appointment): aimed at vulnerable people or those suffering from energy poverty.
- Home intervention service: the intervention is performed at the person's home. This service is aimed at people who are suffering from energy poverty or who cannot move outside their home. In this case, an energy officer goes to diagnose the energy efficiency of the home and decide what interventions should be carried out. During the visit they provide information on energy saving habits that can be applied in the home and the regulation of consumer equipment. They also show the people they are visiting the different types of low-cost saving materials that can be installed in the home to reduce energy consumption and maintain thermal comfort. In the case of social services users, this type of material is installed in the home.

The EAPs arose from two previous pilot experiences: the Energy Poverty Care Points (PAPes in Catalan) trialled between November 2015 and March 2016, and the employment and poverty reduction programme "Energia, la justa", which took place between February and July 2016. The EAPs as they are currently provided are, therefore, a hybrid between the two programmes. On the one hand, like the PAPes, they offer a service to all citizens and advise and intervene in proportion to the needs detected, while on the other hand, inspired by the "Energia, la justa" programme, they favour the employment of long-term unemployed people in the niche of home energy efficiency.

It was in January 2017 that the 11 front offices and five back offices were created, all of them spread out between five territorial blocks in Barcelona, comprising the following districts: 1) Nou Barris; 2) Sant Andreu and Sant Martí; 3) Ciutat Vella and L'Eixample; 4) Sarrià - Sant Gervasi, Les Corts and Sants-Montjuïc; 5) Gràcia and Horta-Guinardó. Each of these has two information offices (front offices), except for block 4 which has three, and an advice and intervention by appointment office (back office).

In most cases, the information offices are located in the Housing Offices. The exceptions are Nou Barris, where a front office is located in an alternative community management space (the Casal de Barrio del Verdun, a neighbourhood centre), and in Horta-Guinardó, where the front office is in the Mas Guinardó offices.

### **But what do we mean when we talk about "energy poverty"?**

Energy poverty can be defined as a situation in which members of a household cannot access basic energy services (such as heating, cooking, electricity, etc.), or when these services represent an excessive cost for the family unit (Tirado *et al.*, 2012). Energy vulnerability refers to households that, although not considered to be in a situation of energy poverty, may be at risk of suffering from it when certain conditions internal to the home (such as job loss) or external or contextual conditions (such as rising energy prices or the economic crisis) occur (Tirado *et al.*, 2016).

### **Incidence of poverty and energy vulnerability in public health**

Energy poverty is a variable that has a great impact on the public health of citizens and that, taking into account the factors that generate it, has an increasing incidence.

In Spain, the current situation can be explained by several factors. Firstly, the increasing prevalence of energy poverty associated with the loss of household purchasing power due to the economic crisis (Tirado and Jiménez, 2016). The increase in the risk of poverty or exclusion is manifested in different ways, including energy poverty, one of the many deprivation factors of the most deprived households.

Secondly, the characteristics of homes that have an impact in this area due to factors such as their age and the architectural quality associated with compliance with building regulations (IDAE, 2011). Practically half of the housing built in the Spanish context were built before 1979 and without any building regulations that required minimum thermal characteristics (Ortiz and Salom, 2016). As a consequence, it has significant deficits in terms of energy efficiency.

Thirdly, the price of energy paid by consumers in Spain has risen sharply in recent years. Both electricity and gas prices have risen, and the increases have been among the most pronounced in the EU-27.

Energy poverty is a significant public health problem that is becoming increasingly visible. Resource-saving behaviour – such as the use of alternative fuels (solid fuels, for example) or not fully lighting up the home – expose members of vulnerable families to indoor pollution and increase the risk of falls and fires (Marmot Review Team, 2011).

The health and well-being impacts described are unevenly distributed across social class or ethnicity, for example (Walker and Day, 2012). In addition, there are groups that are more vulnerable to the effects of energy poverty on health, such as the elderly, children, and people with chronic health conditions (Hills, 2012). It has also been reported that women may be more susceptible to the effects of low temperatures (Barnett *et al.*, 2005).

In the Spanish context, the economic situation of crisis experienced in recent years, and the unequal exit from it, have aggravated the problem of energy poverty. The percentage of households that could not maintain an adequate temperature in 2015 in the Spanish context was 10.6%, an increase of 43% compared to 2010. This increase was one of the largest in Europe, surpassed only by Greece, Lithuania and Italy. In Spain, the low-income population who declared that they could not maintain an adequate temperature at home in 2015 was 23.3%, above the European average. This percentage is aggravated if we focus on people in a situation of social exclusion. A Red Cross report observed in a sample of people at risk of poverty or social exclusion attended to in 2014 that up to 41.4% stated that they could not maintain an adequate temperature in their homes (Spanish Red Cross, 2015).

In Catalonia, in 2016, 9.1% of households in Catalonia could not maintain their home at an adequate temperature during the winter and 7.4% had delays in the payment of bills (gas, electricity, water etc.). Moreover, 5.9% reported having damp or mould on the walls, floor, ceiling or foundations, according to data from the 2016 Living Conditions Survey (ECV). Although these percentages are comparatively slightly better than the Spanish average, they have all worsened significantly since 2007.

The prevalence of energy poverty in low-income populations, below the monetary poverty line, is at alarming percentages and is a situation that many Catalan families are far from resolving. Thus, the percentage of households that could not maintain an adequate temperature is double for this population, 22.7%. The same goes for the indicator of late payment of ECV energy bills, which stands at 12.6%. And in the case of the presence of moisture or mould on the walls, floors, ceilings or foundations, the figure triples to 24.9%.

In 2016, the percentage of people living in households in Barcelona who declared that they were unable to maintain their home at an adequate temperature in the cold months was 7%, a percentage that is below the values calculated for Catalonia. The percentage of people in households with late payment of bills was 5%, and in homes with leaks, moisture or rot, 6%. Therefore, these indicators are also below the prevalence obtained for Catalonia. However, Barcelona presents important gradients of inequality, i.e. pronounced differences between areas of the city that remain relatively stable. This unequal distribution throughout the city crosses different aspects of life and affects the population in areas such as education, income, access to the labour market, access to housing and its characteristics.

People living in big cities usually have access to more jobs and better wages, but they are also subject to a higher general level of prices for goods and services, and Barcelona is no exception. In addition, residential insecurity is a major problem now that housing has taken on the dimension of an asset for global investors. As a result, households spend a significant portion on housing and have difficulty meeting other equally necessary expenses, including energy supplies. To better

understand this phenomenon in Barcelona, it is worth consulting the report “Municipal Indicators of Energy Poverty in the City of Barcelona” (Tirado, 2018).

In 2015, Act 24/2015 of 29 July was passed on urgent measures to tackle the emergency in the field of housing and energy poverty. Among other precepts, it guarantees access to basic supplies by people at risk of residential exclusion. While there are several difficulties in enforcing this Act, it is a vital tool for protecting vulnerable families from the housing emergency we are experiencing (Tirado *et al.*, 2016). One of its essential features is that it introduces the precautionary principle, so that the supply company cannot cut off supply if the vulnerability of the affected consumer has not been previously verified.

Consequently, with these aspects, Barcelona is one of the municipalities that is acting most decisively to guarantee the right to housing and living conditions. With regard to energy poverty, it has been the first city council to approve an instruction that develops the application of Act 24/2015. This establishes coercive and sanctioning measures in case of non-compliance with the standard. In addition, the EAPs guarantee the processing of reports on the risk of residential exclusion (IRERs) for situations of great social vulnerability, in order to avoid the supply of water, gas or electricity being cut off. And the local authority has also promoted various initiatives and programmes to reduce energy poverty and transform energy culture in the city.

### **EAP challenges: to influence the change in the current social, economic and environmental model towards a more just and sustainable one**

The general objective of the service is to combat the situation of energy poverty in Barcelona, especially for the most vulnerable people, and thus guarantee energy rights and basic supplies provided for in current legislation, to improve the efficiency of city homes and to take advantage of this project to implement green job initiatives, promoting the employment of people who find it especially difficult to enter the job market. The answers to this great challenge have been articulated through three main measures:

1. The EAPs, as a service that promotes the guarantee of energy rights and the improvement of home energy efficiency for Barcelona’s citizens, ensuring access to basic supplies, through the defence of housing and energy rights promoted by Act 24/2015, of 29 July, on urgent measures to address the emergency in the field of housing and energy poverty. How does it work? Basically, by detecting situations of energy poverty or potential risk of suffering, and increasing the energy efficiency of homes.
2. The EAPs, as a service to promote employment and improve employability, professionally qualifies people with difficulties in accessing the labour market and improves the skills and degree of employability of people who are part of the territorial support teams.
3. The EAPs, as a service to drive community action, foster employment in the city’s neighbourhoods and districts to combat energy poverty, as well as promote actions to prevent situations of deprivation, vulnerability and energy poverty and encourage citizen empowerment.

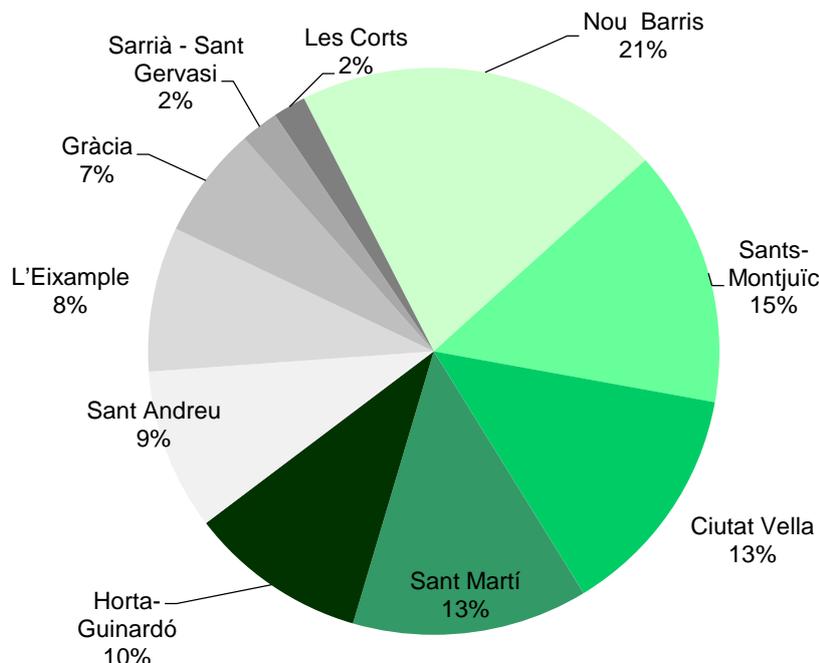
More and more families are coming to learn about their energy rights, what they can do to make their homes more efficient and reduce their bills. The EAP service has helped a total of 79,168 people since its inception in 2017 (23,231 people in 2017, 33,434 people in 2018 and 31,569 people in 2019.) That means a total of 30,472 households (8,462 households in 2017, 13,301 households in 2018 and 12,079 households in 2019) and represents an average of 2,199 people per month and 940 households per month attended to in the city.

The district breakdown for 2019 was as follows: Nou Barris (21% of people attended to in the city as a whole), Sants-Montjuïc (14%) and Sant Martí and Ciutat Vella (each with 13%), followed by Horta-Guinardó (10%) and Sant Andreu (9%).

**Table 1. People attended to by the EAP service. 2019**

	Nou Barris	Sants-Montjuïc	Ciutat Vella	Sant Martí	Horta-Guinardó	Sant Andreu	L'Eixample	Gràcia	Sarrià - Sant Gervasi	Les Corts	Total
People attended	2,506	1,767	1,613	1,611	1,219	1,112	996	769	261	225	12,079

**Graph 1. Percentage by districts of the people attended by the EAP service respect to the total number of people attended in the city. 2019**



Source: Energy advice points (EAPs). Action report 2019.

It should be noted that the number of people returning to the EAPs the following year increased: 2,261 people who had been helped in 2017 returned in 2018, while the recurrence of people already helped by the service has increased to 3,370 people in 2019.

In addition, 10,354 risk of residential exclusion reports have been issued in the first three years of service to protect the vulnerable cohabitation units that have visited it from being cut off, and a total of 37,923 vulnerable customers in the city have been informed, in compliance with Article 6.4 of Act 24/2015, of 29 July, on urgent measures to address the emergency in the field of housing and energy poverty. Also, the action of the service has prevented a total of 5,700 energy-vulnerable families in the city from being cut off.

In terms of the advisory service, a total of 20,544 people were served in the first three years (5,289 in 2017, 7,740 in 2018 and 7,515 in 2019); and a total of 3,655 people have been attended to in their homes (1,378 in 2017, 1,188 in 2018 and 1,089 in 2019) in order to detect situations of energy poverty or potential risk of suffering from them. Home energy efficiency has also increased thanks to the equipment installed in 1,796 households attended to by social services (768 in 2017, 647 in 2018 and 381 in 2019), and the consumption of 9,143 households has been reduced by applying power reductions (1,428 in 2017, 2,165 in 2018 and 5,550 in 2019).

As far as promoting employment and improving employability is concerned, five employment plan programmes have been run with the aim of getting more people with difficulties in accessing the labour market into work. Each one has lasted eight months, except for the last one, which has lasted up to a year, and in total 100 people have been hired.

The beneficiaries have been people in a difficult situation for accessing the job market, in a situation of long-term unemployment and linked to the Làbora programme. People pre-selected by City Council Làbora programme staff who have joined the service and participated in the training programme on energy efficiency and work and social skills over two months. Afterwards, they work professionally as energy advisers for six months in the different city districts. In total, each edition has involved 1,335 hours of energy and social training, plus 430 hours of practical training in the service. This training has not only sought to provide participants with new technical training in energy efficiency, but also to strengthen their cross-cutting skills in order to empower people in a vulnerable situation in terms of joining the job market who, after passing through the service, can re-enter the regular job market with more tools.

Data for 2019 indicates that 37% of the 40 participants hired have found work after completing their employment plan at the EAPs; 74% were women with an average age of 50.5; 34% of the total were previously in a situation of long-term unemployment, and 73% in a situation of severe material deprivation. Specifically, in the last edition, the programme consisted of 267 hours of social and energy training and 60 hours of practical training.

At the community level, since the beginning of the project, a total of 472 community actions have been carried out, 116 in 2017, 188 in 2018 and 168 in 2019 in different formats:

- Workshops / capsules and informative training and education days for people in a situation of social vulnerability to help them understand bills as well as advise them on changes in behaviour and low-cost measures to save on bills.
- Sessions to present the service to the CAPs, the Home Care Service, the Barcelona City Council Telecare Service, social service centres, health boards and residents' associations.
- Meetings with districts, associations, foundations and neighbourhood organisations.
- Development of different protocols for the detection and referral of energy vulnerable cases with various municipal services in the city (Fire Service, Housing, Social Services, Immigration, care for women, etc.).

During 2019, one of the most important channels for reaching the public has been to promote the community axis plus knowledge and recognition of important players in the city who work on caring for people. This is one of the challenges that had been established for 2019, with a greater impact on the professional group that could be a prospector and derivator of the service, holding meetings, gatherings, talks or participating in debates or round-tables. Of the total of 168 community actions carried out in the last year, 40% have been addressed directly at the public and 57% at the professionals attending them.

### **... And now, how should we deal with the climate emergency?**

So far, we have described the service as a care device for fulfilling the energy rights of Barcelona's citizens which, with small home and educational interventions, aims to contribute towards making the city's homes a little more energy-efficient. We have also made clear the project's commitment to implementing green employment programmes, generating jobs linked to the prevention of climate change, the exercise of fundamental housing rights and generating more decent job opportunities for the vulnerable population. Finally, we have highlighted the service's commitment to community and local action, as a privileged space for preventing situations of vulnerability or energy poverty.

But why all this? In the current context, there are plenty of reasons to continue advancing and developing EAPs so that they can be definitively consolidated as an essential basic service in the context of the climate emergency in which we are immersed.

Firstly, because it is a public health issue. In situations of energy poverty, the cold outside penetrates inside houses and ultimately, by various means, impacts on the state of people's health. Moisture inside homes promotes mould and visible microbial growth, which can have a direct effect on health. Cold inside the home has impacts that can trigger life-threatening diseases such as some affecting the circulatory system (strokes or acute myocardial infarction) or exacerbate some previous diseases of the respiratory system (asthma, chronic obstructive pulmonary disease, etc.). Additionally, it can also act on people with weak health or other previous illnesses, and increase both morbidity and excess winter mortality or have psychosocial impacts because it limits people's normal activity, both indoors and outdoors, limiting socialisation and the fact of being able to enjoy being at home. These factors have an impact on mental health and well-being, and are related to situations of stress, anxiety and depression. Indirect health effects have also been reported: people living in energy-poor households do less physical activity and eat less healthy foods. In addition, energetically vulnerable people often live with the stigma of this situation. All of these circumstances can worsen the physical and mental health of those who suffer from them.

The Barcelona City Council Climate Emergency Declaration on 15 January 2020 states that "Excessive and sustained heat leads to an increase in mortality and morbidity, especially in the most vulnerable human groups, as well as in the rest of the natural world. Between 1992 and 2015, it is estimated there were 980 deaths among men and 2,729 among women (natural deaths of people aged 25 and over) that were attributable to extreme heat, generally fragile older people [...]". Therefore, this climate crisis affects health and quality of life and appears to be one of the major threats to the survival of the species. There are many variables that influence its impact: income levels, age, gender, physical condition and state of health, state of housing. And from the service's accumulated experience it can be concluded that the climate emergency does not affect everyone equally, and that services such as the EAPs can contribute significantly to ensuring basic supplies and thermal comfort indoors as subjective and universal right services, and thus work for real climate justice.

In this context, EAPs play an important role in the city as a matter of right and social justice. One of the main goals of the service has been to give continuity and put into practice what the great social mobilisation against the problem of energy poverty achieved in the years prior to the approval of Act 24/2015. That mobilisation helped to highlight the problem, to empower citizens in terms of energy rights, to achieve this legislative change and to ensure Barcelona City Council was actively engaged in the fight for greater climate justice, understanding it was not only something that concerned the association movement but also public and the private institutions, which had to be co-responsible for this change.

Investing in public services aimed at this paradigm shift also means working from the local administration for a clearer and more active communication of energy rights, making it easier for the most affected people to also become aware of what they can do. After three and a half years, it is necessary to go further and consider whether the EAPs should primarily be a service that guarantees this fundamental right and basic need or also work for more ambitious goals.

In the current context, if we really want to opt for "people first", we must accept that the current social organisation is no longer viable and that our ecosystem is collapsing. Institutions, administrations, companies and citizens must accept their respective responsibilities and try to settle the ecological debt by minimising the impact that the inaction of some and the perversion of others has generated.

It is at this point that we need to consider putting more emphasis on those measures that have the greatest impact on changing the cultural and educational model and community action. From the point of view of a service such as the EAPs, it is necessary to work so that each person, from their field of action, can contribute to the fight against the climate crisis and do their bit. Not only at a micro level, but also at a macro level.

The Barcelona City Council Climate Emergency Declaration of January 2020 raised the need to “Promote the current energy advice points as climate advice points (on green roofs, low carbon supply, etc.) and to continue guaranteeing the basic services of people in a situation of vulnerability” as one of the measures to take care of health, well-being and environmental quality. So, the EAPs want to continue emphasising the axis of guaranteeing rights, where water, electricity and gas for domestic use are understood to be a fundamental basic right. But we must also play a key role in promoting the change in the cultural and educational model called for by our city’s new energy and climate model. And that is because, in the coming years, at the community level, the PAEs will advance in the work of influencing the change in culture and the collective consciousness that this change in the productive, economic and social system requires. Thus, it will be necessary to place even more emphasis on dissemination, training and outreach side, on an individual, group and community scale, and to help our citizens recognise our planet’s limits.

One of the challenges that needs to be addressed immediately and that can have a deeper and longer-term impact is working with and influencing the educational community. As EAPs, this means raising awareness among children, young people and the general public regarding what specific changes this transition to a new model, implies and helping them to understand the environmental impact of the consumer habits which we currently have.

People need to know the repercussions of our consumption model, of our water and energy model: what it means environmentally not to recycle, what it means for our ecological system to consume more than we need without taking into account the waste that this generates. We need to get the message across to the public of how consuming with our current model, wasting water and failing to reduce consumption to 100 litres per inhabitant per day – the target the city has set itself this year – not opting for local agro-ecological production, for mobility habits based mainly on public transport or electric mobility, and so on, affects our energy model and the emission load. We must help to publicise how self-responsible consumption is exercised and what can be done individually to reduce the current 20.4% of total CO<sub>2</sub> emissions in Barcelona that are generated by the domestic sector. (Barcelona City Council, 2017). We need to work with the Energy Agency to encourage citizen initiatives that are committed to self-consumption and the generation of renewable and local energy to the detriment of the current model based on fossil fuels and nuclear power plants.

In short, we must be able to convey to the public what it means to change the current economic model and move towards a model based on energy saving and efficiency, on a rational use of water and energy, on the use of green energy and the use of renewable resources.

In that regard, to achieve this goal it is necessary to carry out actions in the field of education and awareness so that citizens become active agents of change, demanding and vindicating the transition to a new model, demanding legislative measures consistent with the political discourse, bonuses for those who make the effort to operate "in a green way", more investment in aid for the rehabilitation and promotion of the public housing stock that is more affordable and within current building regulations. It is also necessary to work together with the community fabric to be able to increase and expand all this work. There is still a long way to go. It will not be simple or easy, but we must act quickly and decisively, because the current context of climate emergency leaves no other alternative if we want to guarantee the future of the generations that will come after us.

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