HOUSING AND ENERGY CONSUMPTION DURING THE GREEK DEBT CRISIS. AN OVERVIEW OF TRENDS, POLICIES AND EXPERIENCES

E. Chatzikonstantinou[1], F. Vatavali[2]*

[1]College Year in Athens, Athens, Greece

[2]School of Science and Technology, Hellenic Open University, 26335, Patras, Greece

(vatavali.fereniki@ac.eap.gr)

ABSTRACT

The paper investigates the social challenges that emerged in the context of the Greek debt crisis concerning households' access to energy. It analyzes housing production and energy use in the Greek cities from a historical perspective and attempts to highlight the obstacles and the opportunities households face with regards to dealing with their energy needs and to assess policies, NGOs' actions and grassroots initiatives concerning domestic energy consumption. The adopted methodology is based on a mixed-method approach that combines analysis of data, literature review and qualitative research in apartment buildings in Athens. Our main finding is that, during the Greek debt crisis, there is a major change concerning domestic energy consumption in Greece. The relation between housing and energy, as it was formed during the post-war period, has been destabilized and this creates new challenges for policy makers and civil society, as well as for households.

KEYWORDS

crisis; energy consumption; energy poverty; Greece; housing

1. INTRODUCTION

The outbreak of the Greek debt crisis in 2010 opens the discussion on domestic energy consumption in Greece. The economic recession in combination with austerity measures adopted by the Greek governments, lead to the increase of unemployment, as well as to salary and pension cuts and to the rise of taxation [1]. Financial constraints coupled with the rising fuel prices, as resulting from changes in the global energy market and from specific national policies, make energy unaffordable for many households which cannot cover their basic energy needs. Under these circumstances, access to energy is no longer taken for granted and the concern about it becomes part of a wider discourse about the housing crisis [2]. The problems and the challenges regarding domestic energy consumption are actually significant aspects of the deterioration in the living conditions of households. They are also intertwined with the physical deterioration of buildings due to high operating and maintenance costs, over-taxation of private property and pressure put on borrowers who have non-performing mortgage loans.

The Greek debt crisis coincides with significant global transformations in the energy sector, which, among other things, affect housing. The transition to a new energy model which fosters independence from fossil fuels, development of renewable energy resources, liberalization of

the energy market and mitigation of climate change, paves the way for interventions that promote energy retrofitting of the existing housing stock, as well as a low energy building model [3]. In this regard, new policies and new players emerge in the energy market. In some cases, these new trends are related with households' efforts to cover their basic energy needs and to reduce relevant costs.

The aim of this article is to investigate the social challenges that emerged in the context of the crisis concerning households' access to energy. Through studying housing production and energy use in the Greek cities from a historical perspective, we intend to highlight the obstacles and opportunities households face with regards to dealing with their energy needs and to assess policies, NGOs' actions and initiatives undertaken by grassroots concerning domestic energy consumption.

2. METHODOLOGY

The research is based on a mixed-method approach that combines analysis of data, literature review and qualitative research in apartment buildings in Athens. In particular, we analyzed articles, surveys, policy reports and legislation, in order to trace how the concern about housing production and energy use developed (or not) during the post-World War II decades in Greece, with an emphasis on the impacts of the recent economic crisis. As far as the qualitative approach is concerned, we focused on apartment building in order to understand the impact of the crisis on domestic energy use. More specifically, we conducted twenty-three open-ended semi-structured interviews with the inhabitants of thirteen apartment buildings located in different neighborhoods of the city of Athens. Fieldwork was conducted from autumn 2014 until summer 2018.

3. RESULTS AND DISCUSSION

3.1 Housing and energy until the crisis

During the post-World War II decades, cities in Greece, just like in the rest of the European countries, developed based on the assumption that energy consumption could and should be constantly expanded [4]. The post-war development model, that focused on the growth of the service and construction sectors, electrification and large-scale construction projects changed the features of the buildings, which from then on have been connected to technical networks and have been equipped with modern electric devices. Gradually, new technologies expanded and became part of everyday life; nevertheless, energy consumption did not attract the attention of policy makers, designers or researchers, who focused on improving the technical systems that produced energy at national and European level.

In this context, the issue of domestic energy consumption and energy saving was marginal in the processes of housing production. To be exact, at that time, the main political stakes in Greece were to improve the living conditions of the massively urbanized population, as well as to create jobs by enhancing the construction sector [5]. The rise of a middle class and its contribution to the dominant model of housing production and consumption since the 1960s were combined with access to modern energy services and with the affordability of domestic technologies based on electricity and oil. The modern house was equipped with electrical devices (such as water heater, refrigerator, oven etc.), radiators connected with oil burner and elevators in apartment buildings. The energy-based modernization of dwellings improved significantly the living conditions of the population [6]. Gradually, since the 1970s, access to electricity expanded to most households, especially in the cities.

The legislation was a key-factor for this model of post-war urban development [7]. The successive building regulations posed the terms for the characteristics of the buildings and put aside local techniques that responded to climate conditions and were based on a rational and sustainable use of resources. In addition, inadequate control mechanisms and land speculation led to the construction of low

energy efficiency buildings. Thus, although basic needs were covered and social consensus around housing production was created, it soon became obvious that serious social and environmental problems would arise in the future. During that period, it was just a minority of scholars that drew attention to the limits of the dominant model of housing production and energy use [8].

A new generation of buildings appeared in the 1990s and the 2000s, in combination with the construction boom of the period [9]. Although the main mechanisms and actors of housing production were the same as in the past, new materials, technologies and construction practices were adopted. In general, this shift led to the construction of buildings of high energy efficiency. However, it did not respond to a new approach to energy issues, but it was the outcome of a change in technologies and in lifestyles.

Once again domestic energy consumption did not become a topic of interest for policy-makers, construction sector actors and scholars. Similarly, the environmental movements focused on the struggle against large-scale infrastructure projects and the reclaiming of public space and did not broach the subject of the energy and its importance for environmental sustainability and the quality of life.

3.2 The impact of the crisis

The issues of domestic energy consumption were only brought into the spotlight during the Greek debt crisis. *Energy poverty* emerged as a new phenomenon in the Greek society [10,11,12]; a phenomenon that cannot be easily measured and accessed. Relevant problems are spotted all over Europe, and, apart from local particularities, are connected with policies that promote clean energy models [13,14]. In Greece, one of the biggest problems for a large part of the population is heating. As the cost of energy is high, a lot of people do not have adequate heating during winter, buildings are severely damaged by damp and mold, and households seek cheaper alternatives, albeit often unsuccessfully. Apart from heating, problems of accessing energy extend to all fields of everyday life. Unpaid electricity bills are another big problem for many people and in some extreme cases electricity companies disconnect the electricity supply due to arrears.

Domestic energy problems have certain particularities in apartment buildings, where material characteristics, tenure status, existing legal arrangements and the mixture of different social groups prevent the adaptation to the new conditions [15]. The fact that most apartment buildings, especially the older ones, have central heating systems and shared facilities, such as elevator, lighting and intercoms, means that all residents have to contribute to relevant costs. However, the coexistence of owners and tenants, who during the crisis have different means and priorities, causes conflicts. As a result, the last winters in most of the apartment buildings, the central heating system is out of function and in some cases, apartment buildings are disconnected from the electricity network. In this context, the possibilities and the constraints that stem from the decision-making processes concerning the maintenance of the building and the common life of its inhabitants acquire a brand-new significance, and it seems, for the very first time, that the social consent that developed around the post-war urban development system is collapsing.

In this regard, practices connected with domestic energy use change. Energy consumption has substantially decreased, as many people quit all the unnecessary activities, while others get into a state of deprivation. Apart from the reduction in consumption [16], many households change their heating systems, in order to cover their heating needs and decrease the relevant costs, especially in apartment buildings where central heating systems were not in use. In addition, homeowners who can afford cost proceed to energy retrofitting interventions at their property, in line with market trends and policy directions.

3.3 Policies and initiatives

The recognition of the problems connected

with the access to energy at home has led, also in Greece, to the adoption of a series of policies and emergency measures. Among others, there are subsidies for heating oil, social tariffs for domestic electricity consumers, electricity reconnections, and favorable arrangements for debts and arrears to energy suppliers. Access to state benefits is connected with social and income criteria, while the energy specifications of the buildings and the difficulties of households to achieve thermal comfort conditions in their residence are not taken into consideration. In this respect, these policies and measures constitute a form of income support for the beneficiaries but not a sustainable response to households' energy needs, one that could improve their living conditions.

Apart from the emergency measures for access to energy, since the beginning of the crisis a range of policies and programs for improving the energy efficiency of the housing stock have been developed, in accordance with policies that foster the mitigation of climate change [17]. Initially, and while the crisis was not yet fully perceived, a complex set of arrangements was created for the construction of low energy consumption buildings that, except for the environmental goals, attempted to stimulate the real estate market and the construction sector. Nonetheless, until today the results of these policies and programs are not significant. At the same time, the central government has planned and implemented in successive phases the program for the energy efficiency of houses "Saving at home". Even though this program has contributed significantly in a change of attitude towards the use of energy in residences, it is limited in scale and in many cases leads to non-integrated energy interventions. A question that arises about energy retrofitting of buildings is related with the impact of the increase of housing prices on poor tenants who might be evicted and urged to live in lower quality houses or in peripheral areas, within the context of the so called "green gentrification" process [18].

In addition, a regulatory framework for Energy Service Companies and Energy Communities is established in Greece. Energy Service Companies undertake energy efficiency interventions in existing buildings by using the energy savings to pay back the capital invested in energy upgrades. On the other hand, Energy Communities aim at involving citizens, local authorities and companies in projects designed to reduce energy consumption and produce clean energy at a local level. However, these new policies respond to models that were applied in other countries and are not related with the local processes of housing production.

A measure that lies at the threshold between the social and the energy policies is the adoption of the legal framework that opens the way to install autonomous heating systems in the flats of apartment buildings without the permission of the tenants' assembly. This measure was adopted in order to put an end to the 'hostage' of those tenants who do not have adequate heating at their homes due to the inability of other tenants to pay their share for the central heating cost. However, the energy efficiency of such interventions is questionable, as energy issues of the building are not addressed as a whole. The social impact of the measure is also controversial, as it creates new differentiations that could undermine in the long term the social and material viability of the apartment buildings.

Except for the central government's policies, the discussion about energy at home is usually intertwined with NGOs' actions. During the first years of the crisis, environmental NGOs focused on the marginal – at that time – issue of energy poverty, through awareness campaigns, while later they paid attention to energy retrofitting, renewable energy production and energy communities. Consumer associations play similarly an active role in issues related with energy use at home and provide legal support to households that live without electricity or under the threat of disconnection.

On the other side, the actions of social movements connected with energy consumption at home usually have defensive

character. The incorporation of property tax in the electricity bills from 2011 to 2013 and the resulting disconnections due to debts led to mobilizations to prevent disconnections, to the denial of paying the bills, and to the creation of informal technical groups that reconnected residences to the electricity network [19]. Similar actions have been promoted by local movements even after 2013, when the government decided to remove the property tax from electricity bills, as significant number of households still could not afford the cost of energy and the debts to energy suppliers. However, they were not so dynamic, thus gradually an individual approach to energy problems replaced the collective one. It is noteworthy that the mobilizations about domestic energy issues focus merely on people's right to energy and on ensuring decent living conditions, far from opening the discussion about 'energy democracy' and 'just transition' [20] and from claiming an alternative energy model that expands beyond middle class investors and towards vulnerable consumers.

3.4 Experiences and practices

Before the crisis most consumers did not have problems of accessing to energy, nor had they concerns related with the use of energy at home. As one of our informants who lives in an apartment building states, in the past the central heating system was in operation for many hours every day, even when the weather was good: "the sun was shining and inside the building it was boiling-hot […] and in many cases we kept the windows open" (K.H., 68, pensioner).

After the outburst of the crisis things and services taken for granted, including access to electricity or the use of heating, became a contested field that affected all social groups, though in different ways. It was the first time that "people have to deal with the question whether they need heating or not" (L.T., 34, architect). In the new context, many households fall into a status of energy deprivation. In order to meet their energy needs, they adopt a wide range of new practices. Regarding heating, households use a variety of equipment, exclusively or in combination, even if that pushes them to cut other expenses. In many cases though, households' efforts to satisfy their heating needs individually fail in reducing energy bills and are less effective compared to the use of the central heating system. The manager of an apartment building told us about the rise of the cost in households' budget:

Many people spent money buying cheap air-conditioners, convectors or other heating appliances. But were cheated. […] They thought that they would pay 200 euro for the air-conditioner, plus 100 euro for the cost of electricity and that they would solve their problem for a while. People continued to buy convectors, stoves, radiators, until they received the first electricity bills.

A.P., 60, mechanical engineer

Besides short-term solutions, some households implement retrofitting interventions, in order to reduce energy costs and ensure better living conditions. Replacement of window frames, improvement of heating systems, installation of solar water heaters or insulation are widespread practices. For example, considering that the central heating system in one of the apartment buildings we studied was off for two years, a flat owner decided to disconnect his apartment from the central heating system and connect it to the natural gas network, in order to have autonomous heating and access to a relatively cheap form of energy. In another apartment building, the tenants' assembly decided to take a loan offered by the natural gas company, in order to upgrade the heating system and shift from heating oil to natural gas "which is definitely cheaper" (I.P., 41, civil servant). Similarly, the owner of a residential building took advantage of a state funding program and converted the central oil-burning heating system to natural gas powered, which is "a change that upgrades the status of the building" (G.K., 34, unemployed).

Most of energy retrofitting interventions are implemented through private funds and means. The incentives offered by the state are

limited in scale and are based on long and complicated processes. According to one of our informants, "it is really complicated for owners that are not experts to make energy upgrading interventions through such programs… They are not considering the complex ownership relations in apartment buildings" (G.K., 34, unemployed).

As far as the policies to tackle households' energy problems are concerned, they are considered insufficient and full of controversies. The case of the heating oil subsidy program is indicative. As our informants described, a low-income couple of immigrants was excluded from the subsidy because they were undocumented (D.G., 65, pensioner). A self-employed man who could not cover his energy needs was also excluded from the subsidy because the evaluation of the applications took into account the annual income of the previous year which, in his case, was rather high, and not his current income (S.X., 42, self-employed). On the other hand, one relatively affluent household that had the means to cover its energy needs was between the beneficiaries (V.K., 78, pensioner). Even though the heating oil subsidy program falls to response to the needs of the most vulnerable or those in need, in the case of an apartment building where the central heating was not in use, the fact that twenty-three of the forty-six households received the subsidy let them use it again. As an old resident of the building remarks:

During the crisis, we had a lot of complains. Because some people wanted the heating and other don't. Several assemblies were held, but we didn't take any decision. For two years the central heating was off. Now, this year, because they announced that they will give heating oil subsidies, we reconsidered the situation and we took the decision [to use again the central heating system]. The main reason was that most of us could get the subsidy.

D.G., 65, pensioner

As far as the long-term impact of social movements' actions is concerned, they have contributed to the creation of a climate of tolerance towards informal or illegal practices that aim to reduce energy costs. The main form of these practices – that in many cases have been adopted by households that prior to the crisis paid their bills regularly – is illegal connections to the electricity supply network. Such is the case of a dentist and his family. When the inhabitants of their apartment building decided to stop using the central heating system, he found a technician who modified the electricity consumption meter of their flat in order to pay less than the real consumption. Explaining his choice, he highlighted the burden of taxes:

Our choice to do that is related to the huge increase of income taxation. […] I was obliged to pay […] almost half of my turnover. […] In general, we are well-off in comparison with other people. We are not rich, but under these circumstances, we had to cut expenses.

M.K., 41, dentist

4. CONCLUSIONS

During the crisis, there is a major change concerning domestic energy consumption in Greece. The relation between housing and energy, as it was formed during the post-war period has been destabilized. This destabilization creates new challenges for policy makers and civil society, as well as for households. In some cases, the agenda regarding energy use at home set by the state, NGOs and social movements meet, intersect or evolve in line with households' priorities and practices. Though, according to our findings, in most cases, households develop their strategies in order to cope with their energy needs, either because they are not aware of the tools provided by stakeholders, or because these tools do not fit to their problems. In other words, crisis was a turning-point both for the dominant discourse and social dynamics on energy issues, though in different ways. Specifically, the emergence of energy poverty as a serious social phenomenon, concurrently with the promotion of 'energy transition', forms a new condition for the consumption of

energy at home and affects the living conditions of large parts of the population. In this context, the arising question is whether the new landscape in energy production and consumption creates conditions of exclusion from housing and new inequalities in the urban space.

As far as the policies developed in the field of domestic energy consumption are concerned, either they have the form of energy benefits or energy saving policies, they are characterized by fragmentation and inconsistencies. At this point, the question at stake is how to integrate domestic energy policies in a comprehensive housing strategy. What is critical is to adopt measures to prevent the so called 'green gentrification' and to safeguard the important role of the small market players, thus ensuring the spread of produced benefits to society. Finally, within this context of growing concern about energy, we must consider the role of the social movements in drawing attention to energy issues and in fighting for the right to adequate energy and housing through collective action.

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