RUCH PRAWNICZY, EKONOMICZNY I SOCJOLOGICZNY
Rok LXXXVII – zeszyt 2 – 2025
https://doi.org/10.14746/rpeis.2025.87.2.20

MACIEJ FRĄCKOWIAK[a]

SAVING AS A CHALLENGE: THE DYNAMICS OF CHANGING ENERGY PRACTICES IN THE POST-MINING CITY OF KONIN

OSZCZĘDZANIE JAKO WYZWANIE: DYNAMIKA PRZEMIAN PRAKTYK ENERGETYCZNYCH W POGÓRNICZYM KONINIE

This paper aims to examine how the middle-class residents of Konin responded to the energy price crisis caused by the war in Ukraine. The research material consists of 40 structured qualitative interviews conducted in early spring 2022 in this city, notable for its diverse energy culture and historical dependence on the energy sector (its rapid development was both caused by and intertwined with the growth of the coal mining industry). From the perspective of social practice theory and the sociology of everyday life, I analyse the emotional responses to higher bills, motivations, and measures taken to reduce energy consumption. These include changes in home management, use of space, clothing, perception and adaptation to thermal discomfort, relationships between household members, and plans. I also reconstruct the multi-stage process of changing energy habits, from initiation through confusion and rule enforcement to acceptance, adaptation, and establishing a new normalcy. Furthermore, I identify barriers that discourage or prevent changes in energy habits, including health-related, infrastructural, financial, and socio-cultural constraints. Additionally, I outline a typology of individuals planning to invest in sustainable energy in the context of the energy crisis. In the discussion, I highlight the academic and practical potential of the results. These findings suggest how the energy crisis can accelerate the sustainable energy transition, demonstrate the merits of the approach to energy transition adopted in the paper, and call attention to the need to support individuals and households in adapting to new energy realities.

Keywords: sociology of everyday life; energy crisis; saving practices; energy transition; thermal violence

Celem tekstu jest identyfikacja sposobów, w jakie mieszkańcy Konina reagowali na kryzys cen energii wywołany wojną w Ukrainie. Na materiał badawczy składa się 40 ustrukturyzowanych wywiadów jakościowych przeprowadzonych wczesną wiosną 2022 r. w tym mieście, szczególnym z uwagi na zróżnicowaną kulturę energetyczną i historyczne zależności od tego sektora (intensywny rozwój miasta powiązany z rozkwitem przemysłu górniczego). Z perspektywy teorii praktyk społecznych i socjologii codzienności analizuję emocjonalną reakcję na wyższe rachunki, moty-

[a] Adam Mickiewicz University, Poznań, Poland /
Uniwersytet im. Adama Mickiewicza w Poznaniu, Polska
maciejf@amu.edu.pl, https://orcid.org/0000-0003-3802-1184

RPEiS 87(2), 2025: 323–343. *ISSN (Online) 2543-9170 ISSN (Print) 0035-9629*

wacje oraz działania mające na celu zmniejszenie jej zużycia (zmiany w zarządzaniu domem, wykorzystaniu przestrzeni, ubiorze, percepcji i adaptacji do dyskomfortu termalnego, relacjach między domownikami oraz planach na przyszłość). Rekonstruuję także wieloetapowy charakter procesu zmiany przyzwyczajeń energetycznych, od inicjacji, przez zamieszanie i pilnowanie reguł, po akceptację, adaptację i nową normalność. W artykule zajmuję się również identyfikacją barier zniechęcających do zmiany przyzwyczajeń lub taką zmianę uniemożliwiających, w tym ograniczenia zdrowotne, infrastrukturalne, finansowe i społeczno-kulturowe. Przedstawiam też zarys typologii osób planujących w kontekście kryzysu energetycznego inwestycje w zrównoważoną energię. W wnioskach wskazuję na poznawczy i praktyczny potencjał ustaleń. Sugerują one, jak kryzys energetyczny może przyspieszyć transformację energetyczną, wskazują na zalety przyjętego w tekście podejścia do przemian energetycznych, a także na konieczność wsparcia jednostek i gospodarstw domowych w procesie adaptacji do nowych realiów energetycznych.

Słowa kluczowe: socjologia codzienności; kryzys energetyczny; praktyki oszczędnościowe; transformacja energetyczna; przemoc termiczna

I. ON STUDYING ENERGY PRACTICES

About three years ago, most of us anxiously followed media reports warning of a potential energy crisis resulting from the aggressive war Russia unleashed in Ukraine. The media predicted power outages and evoked memories of the hardships faced by Poles during World War II or the 1980s, when communities had to invent various ways to keep warm and prepare meals amid fuel shortages. As social researchers, sensing what might happen, we quickly began drafting a research project to investigate this challenging period. As it turned out, many colleagues across Europe were developing similar plans around the same time.

A working group soon formed, followed by the *Disrupted Routines* research project, initiated by members of the Sociology of Consumption section of the European Sociological Association and coordinated by Melanie Jaeger-Erben from the University of Cottbus (for comparative research results, see Jaeger-Erben et al., 2025). Researchers from the Faculty of Sociology at Adam Mickiewicz University in Poznań were responsible for the Polish segment of the study.[1] The research was conducted in two stages in each participating country: initially, a national survey was implemented (in Poland, questionnaires were distributed in April 2023), followed by qualitative research. The

[1] The Polish part of the Disrupted Routines team consist of the staff from the Faculty of Sociology at Adam Mickiewicz University in Poznań: Mariusz Baranowski, Rafał Drozdowski, Maciej Frąckowiak (initiator and coordinator of the research), Jan Jęcz, Małgorzata Kubacka, Ryszard Necel, Agnieszka Nymś-Górna, and Przemysław Pluciński. These individuals were also involved in discussions on the interview scenario and conducted the interviews. The transcription of the interviews was a two-step process: the initial (computer-generated) versions were checked and corrected by those participating in the 'Preparation for Field Exercises' course conducted at the Faculty. The Polish part of the survey was funded by Adam Mickiewicz University (the 'Excellence Initiative – Research University' project, grants: Maciej Frąckowiak, Ryszard Necel).

empirical research aimed to explore how different European societies experienced the energy crisis triggered by the war in Ukraine and its aftermath. To what extent will the energy crisis affect changes in energy use patterns among individual consumers and households? Will it accelerate or slow down the transformation that has long been deemed necessary, considering climate change, the depletion of traditional fuel sources, or disruptions in global supply chains?

When planning the Polish segment of the project, we drew inspiration from two areas. The first was research on coping with crises, especially from the sociological perspective of everyday life (see, e.g., Garfinkel, 1967; Bourdieu, 1977; Shove et al., 2011). Notably, the several-year tradition of researching the subject in the Poznań sociological community was crucial, as the staff had previously conducted similar research on the pandemic and the everyday lives of Polish women and men (Drozdowski et al., 2020a, 2020b, 2021; Krajewski et al., 2023; Kubacka et al., 2023) and the social welfare sector (Frąckowiak-Sochańska & Hermanowski, 2020; Doiczman-Łoboda et al., 2021; Hermanowski et al., 2022). These experiences shaped our research team, convincing us of the value of ad hoc projects in response to unpredictable events and providing an opportunity to practise public sociology.

The project under discussion also resembles the aforementioned endeavours in that it employs theories of social practices to analyse the energy crisis, focusing on the adaptation strategies of those experiencing it. Following Shove and Walker's (2014, p. 41) suggestion, we considered energy supply and demand as part of the continuous reproduction of sets and totalities of social practices. This framework allowed us to understand that energy practices (such as laundry, cooking, bathing, or heating) are key activities that sustain daily order – an order that both conditions and is susceptible to changes in these practices. The need to save, driven by rising prices or uncertainty of supply, results in disruptions that people try to cope with, often in creative and subjective ways (Rakowski, 2010; Krajewski et al., 2023; Nosal & Frąckowiak, 2025). Resourcefulness in this context is not an innate disposition but rather a resource that an individual or household possesses, varying in extent from one to another (MacKinnon & Derickson, 2013).

Focusing on households as places where energy ceases to be an abstract resource dependent solely on external systems and determining behaviour, and instead begins to function as a structuring element of everyday life, also allowed us to see the transformative potential of the energy crisis. In addition to behavioural changes, our research also aimed to question the existing interpretive frameworks individuals refer to when justifying their behaviour. When asking about the effects of the energy crisis, we also inquired about social imaginaries of the crisis: How its sources are perceived? How responsibility for its effects is expected to be distributed? And how the available support and future scenarios are explained and evaluated?

The latter aspect particularly interested those members of our team focused on the sustainability of consumption, the second tradition referenced in our study. Climate change is prompting the development of new theoret-

ical concepts of energy consumption to better explain and support the desired transformations. These include consumption corridors (O'Neill et al., 2018), energy landscapes (Roesler & Stieger, 2020), energy transformation in post-mining regions (Sadura, 2021), socio-ecological systems (Plank et al., 2021), and energy cultures (Stephenson et al., 2010). All of these concepts advocate for a more integrated approach to the design and implementation of sustainable infrastructure, emphasizing the mutual influence and dependence on social practices. The co-evolution of infrastructure and social practices was recently illustrated by Watson and Shove (2023), who reconstructed the development of gas central heating in the UK. They demonstrated how this once-new technology affected the use of domestic space and shaped different expectations of thermal comfort. Simultaneously, they pointed out how its uptake depended on local policies and changing perceptions of living standards.

Our quantitative research conducted to date shows that the energy crisis was a widespread experience. Most respondents reported price increases for home heating (86%), electricity (89%), and water heating (79%). These increases proved to be severe for almost half of them. The largest group (37%) said that while they were not previously worried about energy prices, rising costs had made it a concern. A further 12% had struggled to pay their energy bills for a long time, and the recent price increases had exacerbated this situation. We also observed that rising prices or the uncertainty of energy supplies elicited characteristic responses: 71% of respondents tried to conserve energy as much as possible, and 55% cut back on other expenses to cover rising energy costs. We were also interested in the specific methods they used to save energy. Among the most common were turning the lights on less often during the day and taking fewer or shorter showers. Respondents also adopted alternative means of keeping warm, such as blankets, socks, slippers, additional layers of clothing, or a hot water bottle. We also asked (using a multiple-choice question) about the purpose of reducing consumption: for 70%, it was primarily a way to save money; 51% did it (also) to prevent climate change; and 50% indicated that it was also a form of helping to prevent power outages. It is also worth noting data on the transformative potential of the energy crisis in Poland. Of those who reported saving energy, 90% said they were willing to maintain their new habits once prices return to previous levels. Additionally, 60% reported talking about energy more than they had the previous winter, and 55% believed that the current crisis should be used as an opportunity for societal change.

The data I cited have been published. A report on the quantitative part of the Disrupted Routines project was disseminated in the second half of 2023 (Frąckowiak et al., 2023). A similar study by the Instytut Spraw Publicznych [Institute of Public Affairs] yielded comparable results (Sobiesiak-Penszko & Banul-Wójcikowska, 2023). However, these studies only partially address people's reactions to the energy crisis. While the survey declarations indicate an interesting prevalence of changes in energy consumption patterns and intentions to persist with them in Polish households, they do not offer insight into the daily struggle of negotiating previously established routines. As we know

from the research by Elizabeth Shove and others, changing habits requires much more than a decision. It is a dynamic and tense process of loosening the previous arrangement of practices – shaped by relationships between household members, animals, materiality, one's own body and senses – and then reorganizing this everyday microcosm according to the new rules. To put it bluntly, a quantitative view – focused on identifying the universality of the phenomenon – requires a qualitative complement to better understand its everyday conditions and consequences.

The goal of this paper is to get a behind-the-scenes understanding of declared changes in behaviour and resolutions, to show their effects on domestic governance, and to examine the factors shaping the dynamics of transforming routines. This pursuit is worthwhile for at least two reasons: it will add to the knowledge of the effects and transformative potential of the energy crisis from the perspective of households, and it will demonstrate the role of approaches that combine analyses of infrastructure and social practices in planning a sustainable energy transition.

The structure of the paper is designed to achieve this goal. In the following sections, I will demonstrate how the moment of receiving a higher bill played a special role in reframing and breaking with previous habits. Next, I will illustrate how austerity measures unsettled households in various areas and what the rearrangement entailed. I will then turn to habits that have failed to change and highlight those that cannot be attributed to laziness, ignorance, or lack of knowledge. Finally, I will address individual scenarios for the future and conclude with a typology of investment planners, generated with the assistance of a research-oriented AI agent customized for this purpose. Before we explore the results, some important information about the qualitative phase of the research is necessary.

II. KONIN: A RESEARCH LABORATORY

Both financial constraints and certain project assumptions led us to focus our empirical efforts in a single location. We aimed to observe how ongoing and changing practices stem from the local energy culture, which includes dominant ways of obtaining energy, shared values, and energy awareness (Rosicki 2019). We needed a case study, especially since our resources allowed only a few dozen interviews, which we did not want to disperse across different urban areas.

We chose Konin – a city of almost 70,000 inhabitants, located east of Poznań on the route to Warsaw – for four reasons (Frąckowiak et al., 2024). First, Konin has diverse settlements, multiple fuel sources, and supply modes. Second, it has a distinct energy culture. The city urbanized rapidly in the 1960s and 1970s due to the expansion of large industrial plants, including lignite mines. These factories accounted for the region's economic potential, landscape, and cultural identity for many years. Their gradual liquidation has

exacerbated processes of depopulation, population ageing, the erosion of residents' sense of belonging, and pauperization of the city. Third, Konin is one of most frequently discussed locations in Poland in the context of the energy transition, including plans to locate Poland's first nuclear power plant (discussed during the research). Consequently, the local civic sector and political discourse have been dominated by discussions about the city's development and the well-being of its residents in relation to energy transition investments (see, e.g. Delta Partner, 2016; Siudak et al., 2020; Churski et al., 2020; BST & Kreatus, 2022; SoftGis & MPZPlan, 2022).

For these reasons, Konin is one of the most important laboratories for Polish sociological research on urban development and transformation. Contemporary efforts focus on the social determinants and consequences of the transformation of the energy sector in Poland, especially in the context of the recently launched EU support program for mitigating the consequences of the energy transition in eastern Wielkopolska (e.g. Sadura, 2022). The academic tradition of studying this city is older, and related to researchers from the Poznań sociological centre who were active in the Konin section of the Committee for the Study of Industrialized Regions at the Polish Academy of Sciences, or later in the nodal problems research programmes funded by the Ministry of Science, Higher Education and Technology.[2] Their research topics included industrialization and changes in social structure, the transformation of peasant and worker families, urbanization, and the phenomenon of anomie. The study of the energy crisis in Konin can thus be seen as an effort by Poznań researchers to return to this tradition of analysing Konin's transformations in a new context.

We decided to conduct the interviews in Konin, but where specifically? Based on the results from the quantitative part of our research and an analysis of the literature, we identified the key factors differentiating energy practices and the experience of the energy crisis: the type of housing, and the source and method of energy supply. Using this information, we selected the areas of the city where we planned to recruit interviewees: Czarków, Gosławice, Łężyn, Pawłówek, Pątnów, and the Old Town. In making this selection, we were guided by several criteria: location in Konin's left-bank and right-bank areas, diversity of development (multi-family blocks and tenements, single-family housing, and mixed), affiliation with both municipal and district heating networks, and inclusion of areas with different statuses (unchanged, degraded, revitalized, and those covered by other investments and projects).

The second sampling stage involved recruiting people living in these six selected neighbourhoods for interviews (aiming for a similar number of interviews in each). Besides the variables concerning type of housing and energy supply, we also sought to diversify the sample by gender, education, age, wealth, and household size. The detailed sizes of sub-samples with these criteria are presented in Table 1.

---

[2] This group included: Władysław Markiewicz, Zbigniew Tyszka, Zbigniew Żechowski, Paweł Łączkowski, Mieczysław Pochwicki, Stanisław Lisiecki, and Michał Chmara (Frąckowiak et al., 2024).

Table 1

Sample characteristics ($N = 40$)

Gender	Men: 19; Women: 20; 1 interview conducted with a couple
Education	Doctorate: 1; Higher education: 25; Secondary education: 13; Vocational education: 1
Age	21–30: 4; 31–40: 8; 41–50: 9; 51–60: 7; 61–70: 5; 71+: 4
Financial status	Very good: 3; Rather good: 22; Average: 15
Household size	1-person: 10; 2-3 persons: 18; 4-5 persons: 10; 6-7 persons: 2
Impact of energy costs on budget	No increase or not noticed: 2; Increase but no impact: 12; Strain but manageable: 24; Significant strain: 2

Source: table generated using OpenAI (2024) based on study data provided.

Of course, we did not intend to limit the research to people moderately affected by rising prices. We used the snowball selection method to recruit interviewees, asking initial participants to identify people from different social classes. Given the income distribution in the final sample and the varied severity of impact, it is important to emphasise that our research was never solely about finding out how people managed to survive. We were more concerned with the extent to which the crisis period was also a time of transforming practices. These transformations tended (as we know from quantitative studies) to be undertaken more intensively by those with greater financial capacity – those who were able to invest or who were forced to save only because of the crisis. As the results presented later in the paper show, many people were preparing so that the bill increase would not destabilize the household budget, especially in view of rising prices for other services and products essential to maintaining the household.

We conducted interviews as part of the qualitative research phase from February to May 2023. By that time, it was already clear that the crisis would not be as severe as initially feared in late autumn. The government's shielding mechanisms of governmental shields designed to mitigate the impact of rising prices were popular, the panic around coal prices had subsided, and the winter turned out to be exceptionally mild. However, the heating season was still underway, and many people were expecting additional bills for the winter heating period, which heightened their sensitivity to the issues under discussion. Additionally, the few months separating the interviews from the moments of greatest tension allowed us to capture the later stages of habit change discussed in the paper.

Given our assumptions, we decided to conduct the interviews using the qualitative technique of individual structured in-depth interviews. The interviews were conducted both online and offline, depending on the preferences of the interviewees.[3] We composed the list of questions to capture how respond-

[3] For the rationale behind this strategy, see Krajewski and Frąckowiak (2021, p. 33); Krajewski et al. (2023, p. 438).

ents coped with the energy crisis in processual terms, enabling us to see how material energy culture is connected to the practices and norms related to it (Stephenson et al., 2010). Together with the interviewees, we discussed the changes in daily life and energy consumption caused by rising costs and the energy crisis, including ways to reduce energy bills and the impact of these changes on living comfort. We also addressed the social and economic aspects of the energy crisis, energy-related routines, and the social context and awareness of the need to save energy. Each interview lasted approximately 70 minutes.

All the interviews were transcribed and, for the purposes of this paper, coded according to the guidelines of grounded theory – open, focused, theoretical coding – using MAXQDA software. The analysis was supported by AI tools. Using the OpenAI LLM, I contextualized the model by customizing GPT through the 'Knowledge' section with uploaded analyses and guiding its behaviour via prompts that applied thematic coding to sets of quotes previously categorized and exported from MAXQDA qualitative analysis software. The customized agent was then used to verify my initial coding, suggest missing categories, develop category descriptions, and select illustrative excerpts.

I also collaborated with the GPT AI agent configured in this way in exploring connections between sets of codes (collections of quotes), as in the case of the areas lacking change and their underlying causes described below. It also proved useful in reorganizing data in new ways – for example, when testing the recognizability of distinct phases in the transformation of routines. Further below, I also highlight other findings enriched through the collaboration with the customized chatbot. Nonetheless, I would like to underline that controlling hallucinations was made possible not merely through prompting with predefined code lists, but primarily through in-depth knowledge of the source material.

III. THE AWAKENING BILL

One of the first questions we asked our research participants concerned their reaction to a bill with higher electricity and heating prices. Owners of coal-based heating were anxiously anticipating what would happen to them this winter. There was also surprise: one woman spoke of how her husband called her to say that the bill had come in at almost twice the previous amount, and she needed to make sure it was not a mistake. Interviewees also spoke of disappointment, noting that measures they had previously taken, such as giving up gas or replacing light bulbs with energy-saving ones, had not worked because the bill had not budged 'a single penny'. Some interviewees mentioned a sense of injustice, stemming from the feeling that the price increase was unfair and disproportionately distributed. A mother of a child with a disability complained that despite their savings, they would still exceed the limits covered by the electricity price freeze policy. Another interviewee recalled conver-

sations with members of the local utility's board of directors, who explained that the increase in rates for supply and maintenance of the network was due to the fact that residents had begun to save money. With consumption falling, covering the company's operating costs was hard. Finally, reading the bills also evoked a sense of helplessness: *Well, it's frustrating, but what can you do? We don't have any influence on it* (ID2, M, 51–60, multi-family house).

Emotions sometimes overwhelmed residents, but more often, they triggered certain actions. These included discussions and reflections on energy saving and the need to alter practices. As we know from the transcripts, these conversations often revolved around the need to save energy, stemming from personal experiences and the general debate in the media at the time. Another category of active responses to the bill included considering alternatives, such as changing energy suppliers, forms of heating, or investing in more energy-efficient solutions. It is worth noting that this did not always end with the choice of an alternative: *Fewer kilowatts, sure – but there are fixed charges, transmission costs, this and that. ... It's a headache. You could disconnect completely and still be paying* (ID33, M, 71+, multi-family house). Participants also mentioned taking less strategic countermeasures, such as adjusting heating, turning off unnecessary appliances, and adopting other practices to reduce domestic energy consumption. Some also indicated using various forms of financial support to ease the burden of rising energy costs. These schemes were available to all consumers but were particularly targeted at those most affected by price increases.

In sociological terms, learning from a higher bill was particularly interesting. As it turned out, one could look into it as into a mirror, not only to feel certain emotions or to motivate actions, but also to reflect on oneself. In the transcripts, we find passages indicating that the bill sometimes served as proof of resourcefulness when it confirmed the effectiveness of saving measures. Conversely, it could be a testament to a lack of control when those measures did not have the desired effect: *I really felt it with that final bill – it was a big one, in my opinion. Honestly. I'd been strict about heating: turning off the radiators when we weren't home, which I hadn't done before. And still, the bills were very high – higher than last year* (ID17, F, 41–50, other). Others recalled their first bill after the increases and reflected on their life choices. A retired teacher shared her frustration: *Well, it can't be right that my retirement pension – the result of a lifetime of work – goes entirely on bills, mostly for heating* (ID14, F, 71+, single-family house). The energy bill was also seen as an economic test of self-reliance– whether one is still independent or needs to turn to others for help. A social welfare centre employee shared satisfaction with maintaining this independence: *I have to say, I gave it a go – and I managed. Especially considering I have a house to maintain that's basically not insulated. But thanks to the extra help this winter, things were a bit better. I didn't freeze, and it was alright* (ID26, F, 51–60, single-family house). Finally, energy bills could also provoke a sense of justice, especially when the logic behind consumer group charges or combining types of cost structures remained unclear. During our conversations, we also encountered situations where familiarization with the

bill details prompted disappointment with local institutions: *Then it turned out we weren't getting our energy from the local power plant, but from somewhere near Kalisz* (ID20, F, 61–70, single-family house).

IV. SAVING AS A (DE)REGULATION OF THE HOUSEHOLD

Our interviewees indicate that decisions to save were made for several basic reasons. The need to save energy arose in response to an increase in the overall cost of living, including electricity, petrol, and groceries. This pressure was felt most acutely by people with limited incomes, retirement pensions, and expenses they could not cut back on, such as necessary medications. Some of our interviewees also pointed to environmental awareness as the main reason for changing their habits. Reducing energy consumption or promoting renewable energy sources was, in that case, part of a broader set of efforts, such as avoiding plastic usage and saving water. Finally, a key motivation for some was the desire to regain control over household energy spending, which involved greater awareness of what affects energy consumption and what prices depend on.

The type of motivation is important because it translates into attitudes toward the changes being made. Before examining those attitudes, it is useful to outline the types of changes undertaken by our interviewees and how they disrupted everyday domestic life. Participants reflected on these disruptions when answering questions such as: How did this winter change your habits related to using electrical appliances, heating, etc.? and How have these new habits affected, or how may they affect, your everyday domestic life?

The first strategy for saving money involved changing how the household was managed: adjusting the timing of appliance use, bathing, cooking, or choosing alternative heating methods. The aim was to fit these activities into hours when electricity tariffs were lower. Changing cooking methods included a growing preference for one-pot meals. Homeowners also tried to rotate heating fuels more carefully: *Well, it saves money because then we don't use electric heaters – we just add charcoal* (ID18, M, 21–30, multi-family house).

The second area of change involved using home space differently to match the temperature conditions in each room: *Well, yes, of course – it's definitely cooler in the room she uses, but we practically don't spend time there* (ID11, M, 31–40, multi-family house). Excluding certain rooms from use also helped save on lighting costs.

The effort to save also necessitated dressing differently at home. Putting on extra layers of clothing, wearing slippers and warmer underwear, and covering oneself with a blanket – practices previously more common among the elderly, less affluent, or residents of single-family houses – began to be adopted more widely. As it turned out, dressing more warmly also depended on the type of activity being performed: *I dress warmer when I work* (ID7, F, 41–50, single-family house).

Fourth, the disruption of daily life was also associated with thermal discomfort. This was particularly felt by the elderly: *Nothing you take away from yourself gives you pleasure. On the contrary – at my age, you want full comfort, not restrictions* (ID14, F, 71+, single-family house). The severity of this discomfort, and thus the need to manage cold and pain, was also related to health conditions: *When I feel my knees or hips starting to hurt, for example, I sometimes take the computer and sit with it just to warm up a bit* (ID7, F, 41–50, single-family house).

These changes also affected consumption patterns. Some interviewees had to adjust their purchases due to the financial pressure caused by higher energy bills. One participant noted that the change concerned not only the type and quantity of products, but also the pattern of consuming them – specifically avoiding waste by no longer buying in bulk: *Now I just do my shopping day by day – to save on things like that, so I can cover the bills* (ID32, M, 31–40, single-family house). In this context, we also heard about giving up pets so that the cost of feeding them would not put additional strain on already strained household budgets.

Higher energy bills also affected the ability to organize family trips, prompting revisions to plans, especially those associated with superfluous entertainment or pleasure. A few examples illustrate this theme well: *You plan everything for yourself, but in the back of your mind – oh God – you're thinking: I still have to fit coal into the budget.* (ID27, F, 71+, single-family house); *We actually gave up the trip to buy pellet fuel instead – it had to be done, and the price had more than doubled* (ID30, M, 21–30, multi-family house); *I can go on one trip... after that I don't know if I'll be able to afford more* (ID27, F, 71+, single-family house).

Finally, the disruption also affected the dynamics of family relationships, intensifying discussions, and sometimes even leading to minor clashes. This is quite understandable, given the increased financial pressure and stress. It was also linked to the need to renegotiate the pre-existing, often unspoken, agreements that regulated shared habits and expectations, for example, over indoor temperature: *And the best part was when I turned the radiator up. An hour later, I come back and – well, it's already turned down again. And I thought, I'll shoot the guy, I'll shoot him, that's it* (ID36, F, 71+, multi-family house). Although humorous, the statement points to the need to assert control, a recurring feature of similar disputes and negotiations.

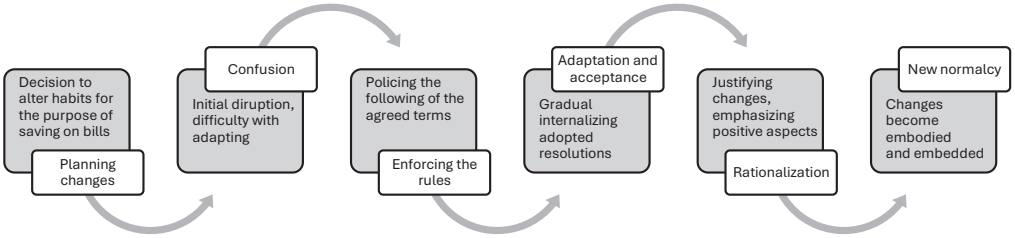
V. CHANGING ENERGY HABITS AS A PROCESS

Pointing to the transformation in household dynamics due to changing energy practices suggests that this phenomenon can be viewed as a process with distinct stages. Organizing the study material this way reveals six essential phases. As shown in Figure 1, we have primarily dealt with the first three so far. In the introduction (section I), I highlighted how the bill can be

analysed regarding emotional triggers and reflections that led to decisions and planning for habit changes to save money. The tensions described in the preceding paragraphs relate to the next two phases: confusion and enforcing the rules.

Figure 1

Steps in the process of transforming energy practices in households under study



Source: the author's elaboration.

The confusion stemmed from adapting daily activities (laundry, cooking, bathing, or heating) for lower costs and energy efficiency, which disrupted domestic rhythms and routines. This was further compounded by changes in household budget planning, tensions in family bonds, and discomfort caused by adjusting to lower temperatures. Transcriptions also reveal that, beyond sociological, psychological, and organizational aspects, confusion included practical difficulties with physically controlling the new temperature – regaining control of heating systems became a challenge. Heating regulation was particularly problematic. Interviewees noted issues with accurately setting and controlling temperatures in wood- or coal-fired systems, manually adjusting radiators, and dealing with uneven heat distribution. One participant recounted having to relearn how to use his stove, resulting in frequent calls from relatives complaining that the house was too warm or cool.

Most of the disputes mentioned appeared in the phase of enforcing the rules. Changing habits is not easy, as it requires discipline. While it may be simple to think about or even implement turning off heating or lights, the coordination of shared saving plans is not always straightforward.

It may be reassuring to know that the three stages described above were usually not the final ones in the dynamics of changing habits. Enforcing the rules was followed by a phase of acceptance and adaptation, and later by a rationalization of the changes, which was easier when their benefits were evident. Interviewees mentioned the positive impact of saving on the environment and described reduced heating as a healthy choice. For example, *if we turn it* [the temperature] *down a bit, even especially at night, we sleep better* (ID23, M, 31–40, single-family house). Changes were also rationalized by energy efficiency and economic benefits. The final stage – which we could

describe as the new normal, borrowing the term from the context of pandemics – refers to a state where change becomes unavoidable, and new routines are integrated into daily life (embedded in technology, calendars, and activity schedules).

Looking again at the illustration of the dynamics of habit change, the simplistic, linear nature of the process may be striking. Based on our research, one can also outline a scenario in which the phase of enforcing the rules is followed by abandoning the change and returning to previous practices when, for example, quarrels threaten to break up the relationship. There may also be a failure to move successfully beyond the adaptation and acceptance phase, especially when the change is not rationalized as a conscious choice but experienced as a compulsion. Finally, it is difficult to expect a new normal when new habits involve risking one's health, living below an acceptable standard, or enduring thermal discomfort as a result of economic hardship.

Before we assume that the energy crisis can work out for everyone, or reflect on the opportunities created by this new normal, it is worth remembering that not everyone went through the process smoothly or had an individual choice. To be precise, not all interviewees reached even the initial stages discussed.

VI. HABITS THAT HAVE FAILED TO CHANGE

A consequence of thinking about changing energy habits through the dynamic model proposed above is the recognition that this process is inherently difficult. Each attempt requires negotiation, opening, and resealing the 'black box' (to use Bruno Latour's well-known term), that is, the configurations of human-nonhuman relations constituting the household embedded in infrastructure, architecture, customs, and bodies. However, as our research shows, there are times when people living in Konin did not even try to change their habits. Understanding these circumstances is important not only for refining the explanatory model, but also for addressing ethical implications.

So where can we locate the sources of the resistance to changing habits? We explored this question by asking: *Were there any habits you tried to change but were unable to?* Somewhat unexpectedly, a common reply was: *There was no need*. By analysing such statements, we can identify several specific reasons that reflect developed resilience to the crisis: the habit of saving, personal or health-related temperature preferences (cold-loving), a minimalist lifestyle (reducing needs, staying at home infrequently, adapting to climate change), investments in energy efficiency and renewable energy, and housing conditions (small apartments). Some interviewees also mentioned the mild winter as a reason for not making additional energy savings.

We then asked what would happen in the future to induce those with this resilience to start saving energy. The answers given included drastic price increases or power outages. There were also concerns about changes in one's life

situation, especially those causing financial uncertainty (illness, retirement, widowhood, job loss). Here is an example: *Sometimes I think about it like this, and I was afraid that at some point I wouldn't be able to afford to keep the house* (ID7, F, 41–50, single-family house).

Some of the people interviewed had not changed any of their habits, even though they recognized the need to do so or saw that it was possible. In our conversations with them, we sought to identify which specific habits they found difficult to change and why. Table 2 summarizes the detailed codes generated using the AI tool contextualized for this study.

Table 2

What has not changed? Summary of areas and reasons for lack of improvement in energy-using practices

Area of no change (examples)	Reasons for no change
Maintaining a constant, higher temperature for comfort	Preference for warmth, health issues (e.g. rheumatism)
Frequent laundry	Specific needs (e.g. limited manual dexterity, frequent soiling)
Use of specialized devices (e.g. dehumidifier)	Health and environmental issues in the home
Cooking preferences	Culinary habits, comfort, cultural associations (e.g. preference for open-flame cooking)
Constraints related to gas heating	Lack of automatic temperature control, price uncertainty
Keeping devices on (e.g, for pets)	Needs of animals (e.g. heating for turtles)
Reluctance to change routines (e.g. night laundry)	Attachment to old habits, fear of change
No reduction in electricity usage	Belief that changes would have minimal effect, lack of motivation to save
Continued long, warm showers	Comfort, entertainment, enjoyment
Continued use of large, energy-consuming appliances	Attachment to old appliances, high replacement costs
Maintaining home lighting for comfort	Lighting preferences, health needs (e.g. fatigue)
Inability to change heating system (e.g. to heat pumps)	Developmental constraints, costs, lack of co-owner consent

Source: table generated using OpenAI (2024) based on study data provided.

This table highlights preference-based limitations: interviewees mentioned warmth-loving habits and long baths or warm rooms as guilty pleasures. For example, one said, *But I don't like it, because, after getting out of the shower or bathtub, I like being warmed by the warm water, I like to step out onto a warm floor* (ID13, M, 41–50, multi-family house). I also recall a retired teacher who viewed warmth at home as a dignified luxury – one of the last

remnants of luxury she could afford – recounting that she had already lived through times of hardship.

A lack of awareness or interest in energy issues, and a lack of economic motivation (the ratio of costs incurred to potential savings from replacing a washing machine or refrigerator, and the relatively small share of energy bills in the disposable budget) also proved to be barriers. Social or cultural norms (e.g. cooking with gas being seen as better to induction cooking) were also reasons for not changing habits. The influence of other family or household members was important: *It was something that I really wanted to see implemented at our house, but unfortunately, I didn't succeed in convincing my parents* (ID16, M, 21–30, single-family house). The issue of differing temperature preferences among household members was also discussed.

Some habits were preserved out of concern for animals (e.g. a turtle that likes heat, a ferret that does not like drafts) or for relatives whose health needs required high electricity consumption (e.g. rehabilitation equipment). Some interviewees noted the adverse effects of continued conservation on well-being: *If it's cold at home, you don't feel like working because you're cold; you're shivering and frowning – you just can't manage. There has to be at least a minimum temperature at home for you to feel okay* (ID27, F, 71+, single-family house).

Constraints were sometimes infrastructural or technological (e.g. an old, uninsulated house where adjusting radiators makes little difference), the lack of available alternatives (e.g. no connection to the city's municipal heating system), limited funds to invest in equipment, or lack of legal entitlement to carry out changes on a larger scale (tenants or co-owners requiring collective agreement, etc.).

All the reasons cited are valid. Still, those listed in the last paragraph are especially important to consider, so that the discussion about a lack of willingness to save – or the effectiveness of change – is not reduced questions of indulgence or financial calculation alone.

VII. TYPOLOGY OF THOSE PLANNING (INVESTMENTS)

Let us return once more to the illustration depicting the dynamics of habit change to examine more closely the phase of the new normal. Earlier, I described it as a time when new resolutions are no longer noticed and are integrated into the household routine. However, the 2022/2023 energy crisis was too short-lived to observe this process in full. In the interviews, we were only able to identify its beginnings. We asked: *Did the ongoing winter, rising energy costs, media discussion, and attempts to change habits somehow change your thinking about your needs? How? What else could/should you cut down on, with a view to reducing energy consumption? Have you already planned something to do so?*

An analysis of the responses to the first question indicates that, at least declaratively, the energy crisis did more than reduce needs for some inter-

viewees; it also changed how they thought about those needs. Interviewees mentioned reducing consumption and spending (e.g. wasting less food, reducing car use in favour of bicycling), directly responding to the rising prices of energy and other goods. The transcripts also reveal a re-evaluation of priorities and what is considered necessary (with indications that this process has begun with the COVID-19 pandemic and the war in Ukraine), or a reaffirmation of earlier beliefs (consistent with previous green and minimalist lifestyle choices).

When asked what else could be cut back, the interviewees usually responded with one of the following answers: reducing the use of appliances (mainly TVs and ovens), being more economical with heat and hot water, changing leisure activities (giving them up or changing their form), and ventilating less. In conversations with elderly or widowed people living in single-family houses, another theme emerged: a possible move to a smaller place to reduce maintenance costs. However, this was mentioned as a last resort. For now, this decision is hindered by reluctance to move (unfamiliar surroundings) and to reduce living space and comfort: *We live very comfortably here. We are comfortable... And as long as we can afford to keep this house, we will live here* (ID28, Couple, 61–70, single-family house).

Finally, it is important to note statements indicating that much more than the already accepted saving practices could not be done. Here is an example of such a comment: *At this stage, beyond these renovations, I'm unable to do too much. Perhaps I lack knowledge on a certain subject, but in my opinion, already at this point, the only thing left for me to do is... Well, it's a bit annoying because I generally like open windows, and now I try not to open them too often...* (ID7, F, 41–50, single-family house).

When discussing opportunities to optimize energy practices, we also discussed investment scenarios. These included areas such as modernizing and insulating buildings (aimed at better heat retention); plans to replace old household and heating appliances with new, more energy-efficient models; energy optimization systems (smart control of radiators or lighting, as well as cheaper options like sealing doors, using window foil, or installing curtains to separate unheated rooms from the rest of the apartment); and energy self-sufficiency (plans to build passive houses and install renewable energy sources).

Among the perceived incentives for considering and implementing these intentions in the future were primarily the desire for energy independence and self-sufficiency, as well as environmental awareness and the desire to reduce the carbon footprint. At the same time, more barriers were cited, including financial constraints, fear of losing social contacts after moving, administrative and regulatory barriers to independent energy production, and distrust of modern green energy technologies (regarding their long-term efficiency).

The above analysis can be extended by developing a typology of people planning investments in response to the energy crisis. The types presented below were extracted using an AI tool by cross-referencing the motivations described with the constraints and incentives for planned changes. The names

and characteristics of the types were generated by artificial intelligence based on the data of this type that I provided while prompting the model.

1. Practical environmentalists: People who plan to invest in energy-saving technologies mainly for environmental reasons. They are aware of the environmental impact of their actions and want to contribute to reducing emissions of harmful gases.

2. Self-sufficient optimists: This group consists of people who strive for energy independence from external energy suppliers and are interested in technologies such as solar panels or heat pumps that could enable them to achieve this.

3. Cost-effective implementers: People who plan investments for financial reasons, aiming to reduce energy bills through energy-efficient solutions.

4. Thoughtful conservatives: Individuals who are cautious and sceptical of new technologies, hampered by concerns about their effectiveness and reliability, especially in the long term, and possibly discouraged by high upfront costs.

5. Socially rooted: This group includes people who recognize the possibility of moving to smaller apartments from their houses but currently focus on social and sentimental values, being attached to where they live and fearing that a change in lifestyle will mean a rupture of ties.

6. Discouraged by constraints: These people consider investments but face barriers, not only economic but also administrative or legal, to which they eventually succumb, taking no further action.

I would like to take the above typology, created through the experiment using an AI tool, as preliminary and requiring refinement in subsequent research. It indicates the complexity of energy-saving behaviour, which must be recognized when planning any public policy. One must consider the interests (motivations and areas of planned change) and the specifics of each identified group (including limitations). It is worth noting that in public discourse, particularly in the context of the energy transition, most attention is paid to the second group (Self-sufficient optimists), which is also the most interesting in terms of the market (being 'fixated' on buying new technologies).

VIII. CONCLUSIONS

In this paper, I aimed to fill the gap in sociological research by describing how the people of Poland experienced the energy crisis and the strategies they used to respond to it. I referred to the results of qualitative research conducted within the social practice theory framework to better understand the circumstances and consequences of these experiences and the behind-the-scenes decisions made. Conducting this research in Konin allowed us to observe how the specifics of the households and elements of the local socio-cultural order conditioned the transformations of daily practices, day-to-day organization, and consumption plans.

Our approach revealed the variety and complexity of motivations for saving, the multiplicity of ways these resolutions have been implemented, and their effects. Together, these insights also allow us to infer the transformative potential of the crisis, answering the question of how it has affected energy transition practices and plans. In this context, what seems most important to me are the findings that highlight the relationship between saving, investing, identity, and a sense of dignity, as well as the preliminary identification and characterization of the stages in the process of changing energy use habits (including facilitators and barriers to transitions between them).

The significance of the findings is primarily in highlighting the practical benefits of using a sociological approach to analyse household energy consumption when developing policies for a just transition and reducing energy poverty. These policies should begin with an appreciation of the complex motivations, conditions, and consequences, and the barriers that hinder or prevent decisions to save or make new investments and implement them.

It will also be easier to construct these policies when we recognize how energy consumption is embedded in the daily dynamics of households, and that attempts to change it inevitably involve transforming its rules and how household members perceive them. Indeed, as the data indicate, it is easier to make a lasting change in habits when it is legitimized rather than seen as a temporary compulsion. Therefore, it is crucial that changes result from transforming how people think about needs and valued ways of satisfying them.

Recognizing dignity and identity as important aspects of saving also helps avoid over-romanticizing grassroots resourcefulness in the face of crisis (see also, e.g. Nosal & Frąckowiak, 2025), especially when it involves health risks, a sense of objectification, or a negation of previous self-image. By paying more attention to these issues, it is possible to carry out more effective and varied communication encouraging sustainable energy management.

The research presented also has its limitations. The first that comes to mind concerns conducting the research in Konin. While this decision allowed us to capture how local specificity manifests in the phenomenon of interest, it also makes it difficult to generalize the conclusions to other regions of Poland or other countries. The second limitation is related to the sample's specifics described at the beginning of the paper. We conducted our research with people who, in practical terms, had something to save or invest in, making it difficult to relate these findings to those who had fewer or different opportunities to adapt to rising energy prices.

These limitations also hint at possible directions for further research, which is worth conducting in other places and populations using the solutions and experiences described in this paper. Observing the discussion about the gradual lifting of energy price caps (which will inevitably result in higher prices) convinces us that – unfortunately – there is unlikely to be a shortage of opportunities for such research in the coming months and years.

If I were to conduct similar research again, either in Konin or in another location, I would certainly place greater emphasis on exploring how the discourse on conservation strategies and technologies influences perceptions of

this practice as being forced or chosen. I would be more interested in social perceptions of the sources of the crisis and the expected distribution of responsibility for dealing with it. I would also emphasize the risks, not just the benefits, of energy conservation in households of different economic statuses. These include the 'thermal violence' mentioned above, as well as the lack of solidarity from those whose individual resources have enabled them to build resilience to the energy crisis, towards those who require institutional support.

Author contributions / Indywidualny wkład autora (CRediT): **Maciej Frąckowiak** – 100% (Conceptualization / Konceptualizacja; Data Curation / Zarządzanie danymi; Formal analysis / Formalna analiza; Funding acquisition / Pozyskanie funduszy; Investigation / Przeprowadzenie badań; Visualization / Wizualizacja; Writing – original draft / Pisanie – pierwszy szkic; Writing – review & editing / Pisanie – recenzja i edycja).

Conflict of interest / Konflikt interesów: The author declares no conflict of interest. / Autor nie zgłosił konfliktu interesów.

Funding / Finansowanie: Research funded by Adam Mickiewicz University, Poznań (Poland), 'Excellence Initiative – Research University' programme (grants: no. 092/12/POB5/0009; no. 092/12/POB5/0010). / Badania sfinansowane przez Uniwersytet im. Adama Mickiewicza w Poznaniu, program „Inicjatywa doskonałości – uczelnia badawcza" (granty: nr 092/12/POB5/0009; nr 092/12/POB5/0010).

The use of AI tools / Wykorzystanie narzędzi AI: AI tools were used, and detailed information about this is included in the section II: Konin: A research laboratory. / Korzystano z narzędzi AI i szczegółowe informacje na ten temat zawarto w części II (Konin: A research laboratory).

Data availability / Dostępność danych: The data used is confidential. / Dane są poufne.

References / Bibliography

Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge University Press.

Churski, P., Burchardt, M., Herodowicz, T., Konecka-Szydłowska, B., & Perdał, R. (2023). *Diagnoza strategiczna Wielkopolski Wschodniej* [Strategic diagnosis of Eastern Greater Poland]. Wydział Geografii Społeczno-Ekonomicznej i Gospodarki Przestrzennej Uniwersytetu im. Adama Mickiewicza w Poznaniu. https://arrtransformacja.org.pl/wp-content/uploads/2022/05/Diagnoza-strategiczna-WW.pdf

Doiczman-Łoboda, N., Frąckowiak-Sochańska, M., Hermanowski, M., Kasprzak, T., Kotlarska-Michalska, A., Necel, R., Oliwa-Ciesielska, M., & Zaręba, M. (2022). *Funkcjonowanie domów pomocy społecznej w czasie pandemii* [Functioning of social welfare homes during the pandemic]. Wydział Socjologii Uniwersytetu im. Adama Mickiewicza w Poznaniu. https://socjologia.amu.edu.pl/images/Pomoc_spo%C5%82eczna_w_obliczu_kryzysu_uchod%C5%BAczego_.pdf

Drozdowski, R., Frąckowiak, M., Krajewski, M., Kubacka, M., Luczys, P., Modrzyk, A., Rogowski, Ł., Rura, P., & Stamm, A. (2020a). *Życie codzienne w pandemii. Raport z drugiego etapu badań. Wersja pełna* [Everyday life during the pandemic: Report from the second stage of research. Full Version]. Wydział Socjologii Uniwersytetu im. Adama Mickiewicza w Poznaniu. https://issuu.com/wydzialsocjologiiuam/docs/z_ycie_codzienne_w_czasach_pandemii_8a63943c6eb314

Drozdowski, R., Frąckowiak, M., Krajewski, M., Kubacka, M., Modrzyk, A., Rogowski, Ł., Rura, P., & Stamm, A. (2020b). *Życie codzienne w czasach pandemii. Raport z pierwszego etapu badań* [Everyday life during the pandemic: Report from the first stage of research]. Wydział Socjologii Uniwersytetu im. Adama Mickiewicza w Poznaniu. http://socjologia.amu.edu.pl/publikacje/464-zycie-codzienne-w-czasachpandemii-raport

Drozdowski, R., Frąckowiak, M., Krajewski, M., Kubacka, M., Rogowski, Ł., Luczys, P., Rura, P., Stamm, A., & Modrzyk, A. (2021). *Życie codzienne w czasach pandemii. Raport z trzeciego etapu badań* [Everyday life during the pandemic: Report from the third stage of research]. Wydział Socjologii Uniwersytetu im. Adama Mickiewicza w Poznaniu. https://issuu.com/wydzialsocjologiiuam/docs/_raport_ycie_codzienne_3

Frąckowiak, M., Baranowski, M., Drozdowski, R., Jęcz, J., Kubacka, M., Necel, R., Pluciński, P., & Nymś-Górna, A. (2023). *Zakłócone rutyny: Raport z badań o życiu codziennym w kryzysie energetycznym* [Disrupted routines: Research report on everyday life during the energy crisis]. Bęc Zmiana. https://issuu.com/beczmiana/docs/zakloconerutyny_digital

Frąckowiak, M., Jęcz, J., Necel, R., Nymś-Górna, A., Pluciński, P., & Rogowski, Ł. (2024, January). *Czy rzeczywiście było tak strasznie? Jak Polacy radzą sobie z rosnącymi kosztami* energii [Was it really that bad? How Poles are coping with rising energy costs] [Presentation]. Spotkanie z mieszkańcami, Konin, Polska.

Frąckowiak-Sochańska, M., & Hermanowski, M. (2020). *Psychoterapeutki i psychoterapeuci w czasie pandemii: raport z badań. Część pierwsza: marzec–wrzesień 2020* [Psychotherapists during the pandemic: Research report. Part one: March–September 2020]. Wydział Socjologii Uniwersytetu im. Adama Mickiewicza w Poznaniu. https://socjologia.amu.edu.pl/images/Pomoc_spo%C5%82eczna_w_obliczu_kryzysu_uchod%C5%BAczego_.pdf

Garfinkel, H. (1967). *Studies in ethnomethodology*. Prentice-Hall.

Grupa BTS, & Kreatus. (2022). *Mieszkańcy i instytucje polityki społecznej w obliczu transformacji* [Residents and social policy institutions in the face of transformation]. Urząd Marszałkowski Województwa Wielkopolskiego w Poznaniu. https://wrot.umww.pl/wp-content/uploads/2022/11/Raport_Mieszkancy-i-instytucje-polityki-spolecznej-w-obliczu-transformacji.pdf

Hermanowski, M., Mączka, K., Necel, R., Nymś-Górna, A., Oliwa-Ciesielska, M., & Zaręba, M. (2022). *Pomoc społeczna w obliczu kryzysu uchodźczego* [Social assistance in the face of the refugee crisis]. Wydział Socjologii UAM; ROPS w Poznaniu; Obserwatorium Integracji Społecznej. https://socjologia.amu.edu.pl/publikacje/892-pomoc-spoleczna-w-obliczu-kryzysu-uchodzczego

Jaeger-Erben, M., Gram-Hanssen, K., Hansen, A. R., Frąckowiak, M., Guilbert, A., Pluciński, P., Sahakian, M., Wethal, U. B., & Wertheim-Heck, S. (2025). Policies for times of disruptions: How households in Europe dealt with the energy crisis in the winter 2022/2023. *Energy Policy*, *205*, 114711. https://doi.org/10.1016/j.enpol.2025.114711

Krajewski, K., & Frąckowiak, M. (2021). Gdzie jest teatr? Czyj jest teatr? O sytuowaniu instytucji teatralnych. Badania eksploracyjne [Where is the theatre? Whose is the theatre? On the positioning of theatre institutions. Exploratory Research]. *Przegląd Socjologii Jakościowej*, *17*(3), 28–49. https://doi.org/10.18778/1733-8077.17.3.02

Krajewski, M., Frąckowiak, M., & Rogowski, Ł. (2023). Facing arrhythmia. Reconstructing time in the pandemic by the metropolitan creative classes in Poland. *British Journal of Sociology*, *74*(3), 433–452. https://doi.org/10.1111/1468-4446.13007

Kubacka, M., Luczys, P., Modrzyk, A., & Stamm, A. (2021). Pandemic rage: Everyday frustrations in times of the COVID-19 crisis. *Current Sociology*, *69*(5), 887–904. https://doi.org/10.1177/00113921211050116

MacKinnon, D., & Derickson, K. D. (2013). From resilience to resourcefulness: A critique of resilience policy and activism. *Progress in Human Geography*, *37*(2), 253–270. https://doi.org/10.1177/0309132512454775

Nosal, P., & Frąckowiak, M. (2025). Zaradność społeczna: Od ujęcia egzystencjalnego do egzystencjalistycznego? [Social resourcefulness: From an existential to an existentialist approach?]. *Przegląd Socjologiczny*, *74*(1), 29–56. https://doi.org/10.26485/PS/2025/74.1/2

O'Neill, D. W., Fanning, A. L., Lamb, W. F., & Steinberger, J. K. (2018). A good life for all within planetary boundaries. *Nature Sustainability*, *1*(2), 88–95. https://doi.org/10.1038/s41893-018-0021-4

OpenAI. (2024). ChatGPT-4.

Plank, C., Liehr, S., Hummel, D., Wiedenhofer, D., Haberl, H., & Görg, C. (2021). Doing more with less: Provisioning systems and the transformation of the stock-flow-service nexus. *Ecological Economics*, *187*, 107093. https://doi.org/10.1016/j.ecolecon.2021.107093

Rakowski, T. (2010). *Potencjał kreatywności w środowiskach ludzi zubożałych i wykluczonych społecznie* [The potential for creativity in the environments of impoverished and socially excluded people]. https://nck.pl/upload/2011-03-14/tomasz_rakowski.pdf

Roesler, S., Stieger, L. (2020). *The City as Energy Landscape* [Exhibition]. SNSF Professorship for Architecture and Theory, Accademia di architettura, September 14 – October 31, Mendrisio, Switzerland. https://www.academia.edu/44175465/The_City_as_Energy_Landscape?auto=download

Rosicki, R. (2019). *Kultury energetyczne Unii Europejskiej* [Energy cultures of the European Union]. Wydawnictwo Naukowe Wydziału Nauk Politycznych i Dziennikarstwa UAM.

Sadura, P. (2022). *Przeminęło z węglem: Regiony górnicze w poszukiwaniu nowej energii* [Gone with the coal: Mining regions in search of new energy]. Polska Zielona Sieć. https://sprawiedliwa-transformacja.pl/wp-content/uploads/2022/10/RAPORT_PRZEMIN%C4%98%C5%81O-Z-W%C4%98GLEM.pdf

Sadura, P., & Dańkowska, A. (2022). *Przespana rewolucja* [The overslept revolution]. Wydawnictwo Krytyki Politycznej.

Shove, E., & Walker, G. (2014). What is energy for? Social practice and energy demand. *Theory, Culture & Society*, *31*(5), 41–58. https://doi.org/10.1177/0263276414536746

Shove, E., Chappells, H., & Medd, W. (2011). Disruption and change: Drought and the inconspicuous dynamics of garden lives. *Social and Cultural Geography*, *12*(7), 701–715. https://doi.org/10.1080/14649365.2011.609944

Siudak, R., Pawlicki, K., Płaza, M., & Garbacz, J. (2020). *Plan adaptacji do zmian klimatu dla miasta Konina* [Climate change adaptation plan for the city of Konin]. Ekostandard Pracownia Analiz Środowiskowych.

Sobiesiak-Penszko, P., & Banul-Wójcikowska, K. (2023). *Kryzys energetyczny. Postawy, opinie i oczekiwania Polaków i Polek* [Energy crisis: Attitudes, opinions and expectations of Poles]. Instytut Spraw Publicznych.

SoftGIS, & MPZPlan. (2022). *Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Konina: Uwarunkowania zagospodarowania przestrzennego* [Study of the conditions and directions of spatial development of the city of Konin: Conditions of spatial development]. Urząd Miasta Konina.

Stephenson, J., Barton, B., Carrington, G., Gnoth, D., Lawson, R., & Thorsnes, P. (2010). Energy cultures: A framework for understanding energy behaviours. *Energy Policy*, *38*(10), 6120–6129. https://doi.org/10.1016/j.enpol.2010.05.069

Stowarzyszenie Wspierania Inicjatyw Gospodarczych Delta Partner. (2017). *Lokalny program rewitalizacji miasta Konina na lata 2016–2023* [Local revitalization program for the city of Konin for the years 2016–2023]. Rada Miasta Konina. https://bip.konin.eu/bipredaktor/uchwaly_VII/uchwala_nr_586_01_1512381065.pdf

Watson, M., & Shove, E. (2023). How infrastructures and practices shape each other: Aggregation, integration and the introduction of gas central heating. *Sociological Research Online*, *28*(2), 373–388. https://doi.org/10.1177/13607804211055495