



Individuals within the Larger System to Support the Energy Transition

# Agents of change or victims of transition? Media framings on household roles during the energy crisis

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## Abstract

The energy crisis that began in late 2021 and escalated after the war in Ukraine in early 2022 was seen as a disruption accelerating the energy transition in Europe. It forced households to save energy and change their patterns of energy use in a struggle to cut dependency on Russian energy, and in public discussions, various kinds of agency were required from and allocated to households. In this article, we analyze a total of 220 articles on energy use published in the main Finnish newspaper, *Helsingin Sanomat*, during the energy crisis between 1 November 2021 and 31 October 2022. We investigate how household agency driven by the energy crisis is framed in the media by analyzing the variety of roles assigned to households and the framings of the agency attached to those roles in relation to mitigating the energy crisis. The analysis provides insights into how households are embedded within the energy system and whether and how they are expected to facilitate the energy transition; moreover, the article contributes to a better conceptualization of the understudied roles and agency of households in transitions.

**Keywords** Energy crisis · Energy transition · Household roles · Effect frames · Media study

## Introduction

The on-going energy transition requires changes in energy technologies and governance models, transformations in the collective, shared practices of governing, managing, and acting in the energy system (Pelka et al. 2022), as well as the emergence of new social roles in households (e.g., Rygshaug

et al. 2018). Although individuals and households play a role in energy transitions, for example as innovators for sustainable lifestyles (Laakso et al. 2021a), their agency has been understudied in the transitions literature, and there have been calls for further research on individual and household roles in transitions (e.g., Huttunen et al. 2021; Raven et al. 2021; Upham et al. 2020).

The role of individuals and households in energy-saving and energy-efficiency measures became an urgent issue across Europe due to the energy crisis accelerated by the war in Ukraine in 2022—a crisis characterized by rising energy prices and the fear of energy shortages. We treat the energy crisis as an unplanned and unjust accelerator of on-going energy transitions, during which the various roles of households and the agency attached to them became pronounced. The IEA (2022), for instance, linked reductions in energy use to cutting reliance on Russian fossil fuels and demonstrating solidarity with the Ukrainian people, in addition to longer term climate action. Previous studies have found that various forms of agency are catalyzed and made more visible by crises (e.g., Beghetto 2021; Benessaiah and Eakin 2021). It could thus be assumed that the energy crisis highlighted and strengthened various forms of household agency, which

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is also relevant for engagement in energy transitions in the longer term, as it forced a change in the ways energy was thought about and used and increased public discussion on the role of ordinary people in the energy system (e.g., Huttunen et al. 2021). For energy transitions research and policy, a more nuanced understanding of these roles and the agency of households in the energy crisis could provide tools to promote more sustainable energy use in the future.

In this article, we first identify the roles of households in the energy transition accelerated by the energy crisis and then examine the framings of household agency attached to those roles in Finnish public debate during the energy crisis. As most individual energy use occurs in homes, and energy-related decisions impact the entire household, we use the term household also when referring to individuals (as residents and consumers rather than, e.g., as politicians or experts). In transitions research, household agency refers to households individually or collectively participating in purposeful actions to prevent or generate change (Fischer and Newig 2016). We follow Wittmayer et al. (2017, p. 50) in our conceptualization of roles as “vehicles for agency”, situated in between the individual and society and establishing a shared reality to which actors can refer. As roles are socially constructed, they are also open to negotiation and change (Wittmayer et al. 2017). The media can play a role in this by means of framing, which, simply put, refers to selectively choosing how to describe a topic (Bolsen 2011). We, therefore, ask *how household agency driven by the energy crisis is framed in the media*, for example whether the media frames households as active change-makers or passive victims.

In many ways, Finland offers a fruitful context to study household roles in energy transitions: the transition toward carbon-free energy production is accelerating, and the target of reaching carbon neutrality by 2035 is more ambitious than in many other European countries (Climate Act 2015). However, the final energy consumption of households per capita is the highest in the EU (EEA 2018), not only due to the northern location of the country, creating high demand for heating during the wintertime, but also because of the extremely energy-intensive lifestyles of people in this affluent Nordic society. High household energy consumption has been facilitated by relatively stable and low electricity prices compared to the rest of Europe.

The energy crisis in Finland was caused not only by rising energy prices, but also by Russia cutting off its gas, electricity, and wood exports, highlighting the need for the fast decarbonation of the energy sector and a swift shift away from dependency on Russian fuels—an aim which Finland achieved, as electricity shortages in late 2022 were avoided, thanks, largely, to the energy-saving and energy-efficiency actions of Finnish households (Energy Industries 2023). Moreover, the role of the media in shaping public perception is particularly important in Finland, where the share of

people trusting mainstream media, such as key newspapers, is among the highest in the world (Reuters Institute 2022) and where many authorities rely on the media when calling for action (e.g., Nurmi 2023).

Next, we briefly review previous research on the roles of households in energy transitions. We also discuss the ways the media shapes public opinion and creates and reveals expectations by means of framing, thereby influencing household agency. We highlight the research gap previously identified in energy transitions research related to the understudied role of households in energy system change. We suggest that a typology of household roles, revealed and strengthened by the energy crisis, and an analysis of the framings of those roles can contribute to understanding and promoting household agency in the energy transition also in the longer term. We then present the research methods of content and frame analysis and the data, covering 220 articles on energy consumption and use in the largest daily newspaper in Finland, *Helsingin Sanomat (HS)*, between 1 November 2021 and 31 October 2022 (see Appendix 1). To provide further context for the analysis, the fourth section provides a short overview of the major events discussed in the media during the period examined. The fifth section explains our findings in terms of the roles and agency allocated to households in the media, and in the sixth section, we discuss the findings as well as the limitations of our study and offer some avenues for further research. Finally, the concluding section of the article summarizes the contribution of our findings to energy transitions research.

## The roles and agency of households in energy transitions

This section first briefly reviews the previous literature related to various conceptualizations of household roles and agency in energy transitions. Here, we highlight the lack of a systematic typology of household roles in energy transitions. The second subsection discusses why framing theory is useful in the context of this study and for understanding the kind of agency that is attached to household roles in public debate.

### Household roles in energy transitions research

Scholars increasingly acknowledge the need to examine more of the ‘socio’ in socio-technical transitions research (e.g., Kivimaa et al. 2021; Upham et al. 2020), and the importance of studying actors in transitions has also been broadly recognized (e.g., Avelino and Wittmayer 2016; Farla et al. 2012; Hyysalo 2021). There are several approaches by various authors to describe individual agency in transitions or technological change, but their contributions are

scattered throughout various strands of the literature, such as innovation studies, social practice studies, and democracy and citizenship conceptualizations related to energy. Furthermore, a systematic conceptualization of household roles is underdeveloped in the transitions literature (Raven et al. 2021), and the roles of individual actors and citizens in transitions have seldom been addressed (for some exceptions, see Avelino and Wittmayer 2016; Hyysalo 2021). In this paper, we make an initial attempt to form a typology of household roles and characterize their agency in energy transitions using the previous literature as a starting point (see Table 1).

In the typology developed by Raven et al. (2021), households are seen as *users of resources*, not only making decisions about adoption and the use of resources and technologies but also acting as non-adopters of technologies and becoming the targets of policy and governance. Households are also *sites of action*, such as renovation activities and infrastructure operation, *sources of data*, as well as *sites of social relations* and the co-production of knowledge.

Schot and colleagues (2016) refer to *users* as important stakeholders in shaping new routines and enacting system change—users who are not only passive recipients of technology, but active contributors to transition processes. Nevertheless, individuals have long been seen as mere recipients of energy services, as the traditional energy system has prevented the active participation of individuals (Lennon et al. 2019). In studies focusing on active agency, citizens and users are often seen as “local *frontrunners*” (e.g., Nevens et al. 2013). The literature on lead users and innovation diffusion (e.g., von Hippel 2005; Rogers 1995) has examined consumers in energy markets both as active *pioneering users* (Matschoss et al. 2015) and passive *non-adopters* of innovations (Kahma and Matschoss 2017).

The understanding of *prosumers* as “ideal energy citizens” has challenged the idea of individuals as passive consumers (Szulecki 2018, p. 22). Moreover, the concept of energy citizenship highlights the active role of individuals in energy transitions, thus distinguishing between *consumers*

and *citizens*. The emerging literature on energy communities as collectives of individuals actively participating in the energy system is also contributing to the discourse on active energy citizens (Apajalahti et al. 2023; Bauwens et al. 2022; Szulecki and Overland 2020; van Veelen and van der Horst 2018). For energy citizenship, however, the critical questions of unequal agency and access to resources should be addressed, as not everyone possesses the resources and capabilities to act as a prosumer or a member of an energy community (Lennon et al. 2019; Szulecki and Overland 2020; van Veelen and van der Horst 2018).

Advocates of practice-based approaches have called for a more comprehensive understanding of ‘users’ in change processes (Scott et al. 2012; Shove and Walker 2014), challenging the idea of households as mere targets of interventions (Heiskanen and Laakso 2019). Indeed, Jalas et al. (2017) note how individuals hold the potential to contribute to transitions as locally embedded actors who can innovate and distribute low-carbon solutions as local *experimenters*. Furthermore, in the context of sustainability experimentation, such as living laboratories, households are seen as important *co-creators of knowledge* and *performers* of everyday practices creating innovations that are less dependent on novel technologies but rather build on sufficiency and reducing consumption (Laakso et al. 2021a; Matschoss et al. 2021). In local experimentation, residents also engage in peer-learning processes as *teachers* and *volunteers* (Heiskanen et al. 2015), but households can also develop new skills and capabilities due to unanticipated disruptions in everyday life, such as blackouts (Rinkinen 2013).

As can be seen from the brief review above, various strands of the literature touch upon many roles for households but seldom offer a systematic conceptualization of these roles in energy transition, thereby highlighting the need for further research. Moreover, agency can refer to purposeful action, for example, through the use of resources such as technology, through innovation and experimentation, and through socio-economic positions, such as prosumers of energy. There is no clear connection, however, between roles

**Table 1** Household roles in the previous energy transitions literature

Roles	References
Users (e.g., of resources), consumers	Heiskanen and Laakso (2019), Lennon et al. (2019), Raven et al. (2021), Schot et al. (2016)
Sites of action, experimenters, innovators, pioneering users	Heiskanen et al. (2015), von Hippel (2005), Jalas et al. (2017), Matschoss et al. (2015), Nevens et al. (2013), Raven et al. (2021), Rogers (1995)
Energy citizen, prosumer of energy, member of energy community	Apajalahti et al. (2023), Bauwens et al. (2022), Szulecki (2018), Szulecki and Overland (2020), van Veelen and van der Horst (2018)
Sources of data, co-producers of knowledge	Heiskanen et al. (2015), Laakso et al. (2021a), Matschoss et al. (2021), Raven et al. (2021)
Sources of novel practices, sites of social relations	Laakso et al. (2021a), Matschoss et al. (2021), Raven et al. (2021), Rinkinen (2013), Schot et al. (2016), Scott et al. (2012), Shove and Walker (2014)

and agency, on the one hand, and the potential effects of this agency, on the other. Next, we discuss the potential of media analysis to fill this research gap.

### Media framings of household agency

As “society’s agenda-setter” (Ganowski and Rowlands 2020), the news media plays a key role also in socio-technical processes: the media is influential in increasing public and policy awareness of topical issues, such as those related to the environment, climate, and energy, in encouraging and motivating various actors—from policy and planning to households—to take these issues into account in their actions, and in sharing information and helping spread social innovations, for example in the context of energy transitions (Lukkarinen et al. 2022). The media also plays a pivotal role in attributing responsibility to both the creation and resolution of societal problems (Olausson 2009).

Media representations can be seen to occur through the so-called “framing”, which Entman (1993, p. 52) defines as selecting some aspects of a perceived reality and emphasizing them to promote a particular interpretation, evaluation, or solution to a problem. Frames are words, phrases, or presentation styles used when conveying information about a topic to an audience (Chong and Druckman 2007). Framing hence works to shape and alter the audience’s interpretations and to encourage them to think, feel, and decide in a particular way (Entman 2007). In the context of transitions, the media can demonstrate actor positions and stakeholder engagement and frame actors as vital leaders, or opponents, of change (Legendijk et al. 2021).

As it is possible to frame the same issue in multiple ways, journalists in the news media choose to express the points they see as most important (Entman 1993), although these decisions can be either conscious or unconscious. Moreover, media frames do not develop in a vacuum; rather, they are shaped by various stakeholders, such as politicians, organizations, and social movements (Olausson 2009). Media discussion hence reflects what is expected of households and what roles they are assumed to play in society. The media has been recognized as a powerful mediator of meanings and expectations toward particular behaviors, which Olausson (2009) terms “meaning construction” or “construction of common sense” and which is highlighted in times of crises (Endres et al. 2016). Understanding the various kinds of agency the media assigns to households is thus valuable, as the roles not only bind households to certain practices, but also illustrate more broadly how the media positions householders in the practices that apply to them: how the media, for example, views households’ use of resources and how they expect households to shape the practice from within.

Several studies have analyzed media frames in the context of transitions. For example, Olausson (2009) studied the media’s attribution of responsibility for collective action in climate change mitigation and adaptation in Sweden. Moreover, Legendijk and colleagues (2021) investigated the media framings of Dutch community renewable initiatives and identified social, economic, political, environmental, innovation, and local development frames. Similar frames, with the additional frames of conflict and technology, were identified by Magnusson et al. (2021) in their study of the news media framing of grassroots innovations in Denmark, the Netherlands, and Sweden. In addition, many studies have analyzed media framings related to novel technologies, such as energy storage systems (Ganowski and Rowlands 2020), geothermal energy (Stauffacher et al. 2015), and smart grids (Mallet et al. 2018). Here, of relevance to our research are the effect frames described by Bolsen (2011), which refer to how agency is positioned in household roles in relation to the broader dynamics of socio-technical organization, including the use of resources and meanings. Bolsen studied news frames and attributions of responsibility to individuals related to energy conservation in the United States, identifying five effect frames: economic effects, environmental effects, societal impact effects (i.e., the impact of one’s action on the collective outcome), personal effects (i.e., lifestyle changes resulting from conservation), and moral or ethical effects. The list below describes each effect frame as elaborated for our research. We use these effect frames to seek to understand the socio-technical dimensions of the agency attributed to households in the media.

- The economic effect frame focuses on the economic consequences of acting or of being the target of activities elsewhere, basically the costs or money saved.
- The environmental effect frame refers to the environmental impacts of actions.
- The societal effect frame concentrates on whether the activities of an individual or household in a certain role are expected to make a broader societal difference.
- The lifestyle effect frame refers to household activities in terms of how they may affect the standard of living of the household.
- The moral effect frame centers on moral and ethical considerations associated with energy usage.

### Materials and methods

Our research task is twofold: first, to identify the roles that are assigned to households by the media and, second, to characterize the agency associated with each role.

In our analysis, we use media articles in *HS* as our data. With 701,000 daily readers, *HS* is the most widely read daily

newspaper in Finland, focusing on both national developments and news in the Helsinki metropolitan region. In this regard, it is important to note that there are no equally influential competitors to *HS*. We focus on communications that may influence the way households think about, for example, taking action to save energy or purchasing energy-efficient appliances. The search included all articles published between 1 November 2021 and October 2022 in *HS* that included the word ‘energy’ and the word ‘price’, ‘saving’, ‘consumption’, ‘use’, or ‘poverty’. The timeframe of the study was selected based on the rise of electricity prices that began in Autumn 2021 and the increasing number of energy-related media articles that followed.

The search resulted in 2142 articles. We first scanned the headlines and lead sections of each article and excluded those articles that did not focus specifically on energy (e.g., those concerning the energy content of food or drinks, sports, or culture), mentioned energy only briefly (e.g., those about climate policies and carbon neutrality goals more generally), or did not mention households in any way (e.g., those related to the rising energy costs for businesses or municipalities). Altogether 1797 articles were excluded from the analysis after this screening. In the next step, we read each remaining article and further excluded articles focusing on household practices outside the home, such as articles on mobility (e.g., those on rising petrol prices or electric cars), leisure activities (e.g., those on flying or swimming, both affected by the rising energy prices), and other consumption (e.g., those on rising food prices due to the energy crisis). Finally, we excluded a series of articles on household energy use during the crisis outside Finland to focus on consumer roles within the Finnish context, and we also omitted articles about the oil crisis in the 1970s that lacked a reference to the present day. This step led to the further exclusion of 125 articles. Consequently, the final sample included 220 articles. The articles consisted of both journalistic material and opinion pieces (news, editorials, columns, and op-eds), and most of them dealt with the national or local scale.

The 220 articles were analyzed with a focus on the roles attributed to households by the media at the time of the crisis. The approach we employed was data-oriented qualitative content analysis (Drisko and Maschi 2016), in which the roles identified were not based on existing typologies but emerged from the data. The process of analysis followed four stages. First, three authors classified the first 20 news articles. We then used Krippendorff’s alpha (Hayes and Krippendorff 2007) to test intercoder reliability. The result (0.67) was low but acceptable in the social sciences. We then thoroughly discussed the principles of categorization and how each of us understood the role in question, after which we categorized the remainder of the articles. We then jointly went through most of the articles and discussed the findings to ensure consistency.

Our analysis led to the identification of eight categories of active roles and four categories of passive roles attributed to households in the articles (for a description of the categories, see Table 2 in “[Agency in the household roles: saver, investor, adaptor...](#)”). By *active roles*, we refer to descriptions of actual actions and activities in the media articles, such as households investing in renewable energy or questioning existing energy policies, whereas *passive roles* refer to media discussions in which households are seen as targets of actions occurring elsewhere in society, such as advice provided by governmental policy experts. However, as the analysis is based on media articles, we cannot discern whether all active roles actually included action. Moreover, in some cases, households were deemed to play an active role when household agency was visible in the form of expectations toward, for instance, energy investments or energy saving.

Next, we used frame analysis as a tool to examine how the agency behind each role allocated to households had been framed by the media to gain an understanding of the qualitative characteristics of that agency. Here, we applied the approach of issue-specific framing as defined by de Vreese (2005), focusing on the issue of energy with a specific emphasis on households, and based our analysis on Bolsen’s (2011) effect frames (economic, environmental, societal, lifestyle, and moral effects) as described in “[Media framings of household agency](#)”. The criterion for deciding that the media had used a certain effect frame was that it was clearly identifiable and significant in the article. For example, we examined whether the media attached economic, environmental, or societal effect elements to the role of households as savers or whether the role of saver was perhaps framed from a personal or moral perspective (for the attached effect frames, see Table 3 in “[Dimensions of agency attached to household roles](#)”).

In the following, we briefly discuss the major energy events during the study period, after which we proceed to a systematic analysis of the roles attached to households in the articles studied and a qualitative analysis of the characteristics of the agency attributed to those roles with the help of the effect frames.

## **From an energy price crisis to an even deeper energy crisis: an overview of the context of the articles studied**

The period of media analysis began in November 2021, during which energy prices were already actively discussed in the newspaper articles. Prices rose due to growing post-pandemic demand for energy and the simultaneous uncertainties of supply related to the water and gas shortage in Central Europe, the rising prices of emissions allowances, and the phase-out of fossil fuel and nuclear energy production. Consumers were repeatedly encouraged to change



their stock-exchange-based electricity deals to fixed-term contracts to avoid rising peak prices of electricity.

In February 2022, the Russian attack on Ukraine and the following political actions in the EU occupied the media space, leading to pessimistic scenarios regarding the effects of the war on the energy system. Finnish citizens were called on to engage in collective energy-saving activities as a reaction to the war. In addition, the IEA published energy-saving tips to reduce dependence on Russian energy (IEA 2022). At the same time, the Finnish government discussed additional CO<sub>2</sub> emission reductions, and this created tensions between the political parties. The questions of energy justice and vulnerability emerged in the political debate, and the rising energy costs and energy security were linked to the need for energy renovations and the promotion of the energy transition.

In March and April 2022, high inflation rates partly due to rising energy prices began to gain more space in the media. In May 2022, the news declared that, due to the war and its consequences for the import of energy from Russia to Europe, energy prices, contrary to expectations, would not decrease for the summer. *HS* even declared energy a “luxury product”.

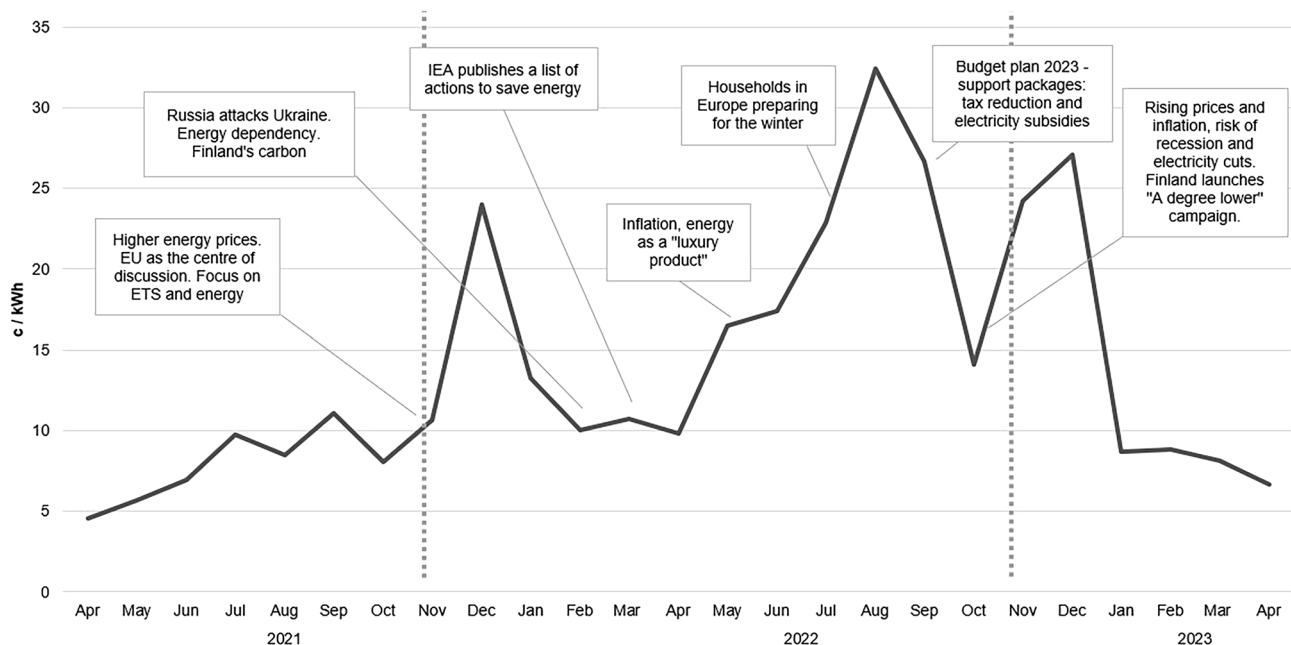
The energy discussion fell silent in June 2022, but again in July 2022, in the middle of the summer, the focus was steered to the coming autumn and winter. The news articles shared tips for energy saving and house renovations and deciding on the best electricity deals. The articles explained that households with electric heating had begun hoarding

firewood and that households across Europe were preparing for the winter with anxiety and fear.

In Autumn 2022, the government’s budget negotiations raised the issue of monetary support for low-income households to manage their energy bills in the coming winter, as well as support for energy investments to promote energy transition. Some municipal energy companies began to sell energy only to the residents in their area, which again raised the issue of energy justice and how residents of some municipalities enjoyed access to cheaper electricity than others.

September 2022 witnessed news articles sharing experiences of households and businesses that had taken energy-saving action: shops had turned off their refrigerators for drinks and households lit fires in long unused fireplaces in their homes. References to the oil crisis were made and saving tips from the 1970s offered. The energy crisis also increasingly influenced the cost of living in apartment buildings, and property sales dropped. Sales of air-source heat pumps, fireplaces, and logs rose, while rising demand increased waiting times for the installation of solar PV systems. Contrary to previous years, spot-priced electricity deals attracted increasing interest as the price of fixed-term contracts rose to record highs. The monetary support for households from the government attracted criticism, as it was seen to benefit mainly middle-to-high-income households.

In October 2022, the government launched the energy-saving campaign *Astetta alemmas* (‘Down a degree’). The possibility of power cuts was frequently discussed, with experts explaining how to prepare for them. In their



**Fig. 1** Timeline of major topics dealt with in news media and electricity price fluctuations in the period examined (marked with dotted lines). Electricity price source: <https://www.sahkon-kilpailutus.fi/porssisahkon-hinta/>

editorial, *HS* predicted the rise of “energy nationalism”, and some municipal energy companies offered customers in their local area better deals. In addition, it was reported that Finns had achieved record energy savings in September, saving 13.5% compared to the previous year. Figure 1 presents the fluctuation in the weekly spot prices of electricity in Finland and provides a timeline for the study period.

### Agency in the household roles: saver, investor, adaptor...

In this section, we analyze the household roles identified in the data (see Table 2 for a general description of each role). Although, in this article, we mainly refer to households as the unit of analysis; here, we follow the terms used in the media articles studied (such as citizens and consumers) to retain the intended meaning. Moreover, there are some overlaps between the roles identified in the data, and some of the news articles discussed several roles. Furthermore, an individual article could allocate both active and passive roles (of several kinds) to households. Passive roles were assigned a total of 195 times in the articles examined. By contrast, active roles were more frequent, attributed, in total, 281 times. Roughly one-third of the articles focused on one role alone, while, on average, we could identify two roles in each article.

The roles classified as including active agency are discussed first in “Households as active change agents”, while passive roles are evaluated in “Households as passive actors”. We describe these roles and add in brackets the

identified effect frames. Each of the roles we identified was framed in the media discussion via several effect frames, meaning that the agency allocated to households varied and should not be viewed in a simplistic manner. The analysis of effect frames attributed to the agency behind each role is presented in “Dimensions of agency attached to household roles”.

### Households as active change agents

#### Saver

The most common role identified in our data was that of a saver, which refers to households actively implementing changes in their everyday life to save energy. Energy saving was discussed in various guises. In many cases, it entailed lowering indoor temperatures, often by one degree, but it also included using the sauna less or washing less laundry and using less hot water (e.g., news articles 29, 43, 49, 90, 160; see Appendix 1). The articles particularly highlighted every household’s ability to recognize their own opportunities to save energy, creating expectations of energy literacy or householders’ knowledge of the most energy-intensive practices in their homes. Energy saving and demand management were described as new “citizen skills” and citizens, accordingly, as skilful and capable of learning new saving measures (82, 83, 84). Characteristic of Finland, the use of wool socks was quite often mentioned as a means of keeping warm in cooler homes (123, 158, 210; see Laakso et al. 2021b). Less common suggestions included avoiding the use of mobile appliances and instead discussing with others face

**Table 2** Typology of household roles in the data

	Role	Number of mentions	Description
<i>Role as an active change agent</i>	Saver	96	Someone reducing energy use at home, e.g., to lower expenses
	Investor	52	Installer of heat pumps or other appliances, adopter of energy efficiency measures, such as insulation of windows
	Adaptor	44	Someone shifting the timing of energy use, shifting from electricity to other energy sources, such as wood, or shifting consumption away from the home
	Buyer	34	Someone actively comparing energy prices and companies and deciding on energy contracts
	Citizen	20	Commentator of or participant in energy politics, conducting patriotic or solidarity acts related to energy
	Prosumer	18	Someone who generates their own power, e.g., solar panel installer
	Prepper	13	Preparing for power cuts or for rising energy prices
<i>Role as a passive actor</i>	Innovator	4	Developer of social or technical innovations to save energy or improve energy efficiency
	Target of advice	62	Receiver of advice or tips to compare electricity prices, to save energy or to improve energy efficiency
	Customer	60	Customer of an energy company, recipient of energy
	Victim	48	A victim of the crisis or someone suffering from rising energy prices or unfair policies, energy poor or vulnerable
	Recipient of support	25	A recipient of support mechanisms by the government, e.g., tax rebates and incentives

to face or reading physical books instead of electronic books (38, 108) (*Economic, lifestyle effect frame*).

The articles emphasized that households should be understanding of and adaptable to the present situation and accept that there were likely to be fewer opportunities to consume (111, 169). Particularly in the context of energy-saving campaigns, people were referred to as “citizens”, “Finnish”, or “Europeans”, (e.g., 57, 59, 151); however, the phrase “ordinary people” was also used (121). Energy saving was encouraged by reporting the degree to which “citizens have saved electricity” and stressing that everyone can contribute—and that almost everyone already had contributed—by their own actions, to mitigating the crisis (which also referred to the war in Ukraine, not only to rising energy prices) (e.g., 160), thereby linking saving to the role of citizens, which will be discussed in more detail below. Indeed, saving was often framed as an opportunity “to do good both for Ukraine and for climate” (60) (*Environmental, societal, moral effect frame*).

### Investor

We categorized those investing in ground- or air-source heat pumps, energy renovations, or energy-efficient appliances as investors. In articles dealing with such roles, households were framed as agents who now paid more attention to the energy efficiency of the building when seeking a new home (196). One article referring to a tweet by the Vice President of the European Commission, Frans Timmermans, noted how “one basically throws money out of the window” in unrenovated homes, as the heat escapes from badly insulated windows and doors (10). In contrast to articles calling for building improvements, several other pieces focused on long waiting times for solar panel or heat pump installations or energy efficiency renovations. As noted in an article of 4 April 2022, “consumers are on the move” and the willingness to invest in climate-friendly solutions was so high that there were serious lags on the supply side, which limited investors’ options (*Economic, environmental, societal effect frame*).

In addition, some investors were presented as “hoarders” of firewood, an issue discussed in many articles (e.g., 148, 192, 213). This role was related to that of the prepper (analyzed later), and these articles focused on households and householders stockpiling firewood for the coming winter to substitute or complement their electric heating, leading to increased firewood prices and the demand for related equipment. Many households had felled trees from their own yard or from neighbors’ forests, illustrating the peer support given and received during the crisis (32) (*Economic, lifestyle effect frame*).

The media also discussed housing cooperatives in connection with the role of investors, demonstrating the role of

*HS* as a local newspaper in the most urban area in Finland. The articles on ground source heat investments reported that “residents of Helsinki” and “housing cooperatives in Helsinki” had commissioned energy improvements and achieved significant energy cost savings. These residents and cooperatives were considered examples for others and forerunners to follow (see also Lukkarinen et al. 2022) (*Economic, societal effect frame*).

### Adaptor

Closely linked with the role of the saver is also the role of the adaptor, which relates to a person shifting the timing of energy use, shifting from electricity to other energy sources, such as wood, or moving consumption away from the home.

In the articles, adapting referred to either adopting new practices, for example using the stairs instead of the lift (e.g., 206) or shifting energy use to different times. The latter included many examples of people who had begun to “live during the night”, washing laundry and charging their electric vehicles during the hours of darkness, but it was also recognized that this was not possible for everyone, thereby raising the issue of energy justice (see Heiskanen et al. 2021). Here, individuals’ varying capacities were thus highlighted. The adaptor role was also emphasized in discussions related to shifts in the timing of consumption from the perspective of the importance to the system of demand response in times of crises (*Economic, lifestyle, societal, moral effect frame*).

### Buyer

The role of the buyer refers to consumers actively comparing electricity contracts and monitoring energy prices if they have signed a variable-rate contract. The role of the buyer was linked to that of the adaptor through discussions related to demand response and the suitability for households of an electricity contract based on variable prices connected to price developments on the Nordic electricity exchange, Nordpool (66, 70, 72). In many articles, buyers were seen as active households taking decisions on their energy contracts. Buyers were, for example, framed as possessing the power to choose, and if they were sufficiently “enlightened” or “deft”, they could achieve large savings in their electricity bills; however, they were urged to exercise caution when taking these decisions (1). Buyers represented energy citizenship, as they were reacting to fluctuating energy prices and thus maintained the functioning of the energy system by “doing the right thing” (*Economic, societal, moral effect frame*).

Nevertheless, many of the articles also described how people were “forced” into the role of buyer by the sudden rise in energy prices. Unlike the role of victims or sufferers described in the following section, buyers were,



nevertheless, presented as rather affluent, owning, for example, large electric-heated detached homes and possessing the ability to perform the necessary calculations and actions to change their electricity deal quite swiftly, monitor electricity prices, and adjust their consumption accordingly. However, some of the articles discussed the ways households “must make new electricity deals” and “must monitor and schedule their consumption” leaving households little option to act otherwise (214) (*Lifestyle effect frame*).

### Citizen

The role of the citizen in our study is reserved for discussions on active individuals commenting or participating in energy politics, making sacrifices, or performing patriotic or solidarity acts for the common good. Here, the articles included reports about households commenting on national or local policies in the media, for example in relation to energy markets or energy investments (*Societal, moral effect frame*).

“Responsible citizens” were considered to “do their part” in the energy crisis. As the then Minister of Environment, Emma Kari, stated in an interview on 22 April 2022, “each air-source heat pump and solar panel installed is a patriotic act for the energy sovereignty of Finland” (50). The media’s expectation that households adopt the role of responsible and patriotic citizens closely resembles the role of solidaristic citizens doing their share to help Ukraine and Europe (30, 48). Finnish citizens were reportedly ready to “suffer cold and hunger for Ukraine and for democracy”, according to Professor Emeritus Timo Airaksinen in an interview on 3 April 2022. Thus, the media reported on how “people are ready to sacrifice on their own if the community is under threat” (115)—although this only entailed reducing indoor temperatures and the use of hot water. The media described a certain type of solidarity citizen termed “activist grannies”, who encouraged others to save energy for the environment and minimize energy profits for Russia (31) (*Economic, environmental, societal, lifestyle, moral effect frame*).

### Prosumer

The role as a prosumer refers to someone who both produces and consumes energy. In this analysis, we identified the role of prosumer in such articles where *HS* discussed households generating their own power and selling the excess energy to the grid. This role was also linked to the role of the investor described above and the roles were frequently described together in the data. In practice, this role refers to households with solar photovoltaic (PV) systems, as no other technical energy-production solutions engaging in the energy market were mentioned in the data. The articles described how households and cooperatives had become “enthusiastic”

about solar panels (e.g., 64). They contained several “success stories” about the installation of solar panels and the related energy and monetary savings, as well as descriptions of how monitoring in detail the energy produced and consumed had become a part of everyday life (15, 209) (*Economic, lifestyle effect frame*).

Compared to the more traditional prosumer, a somewhat different role is that of the political or “ideological” prosumer described in some of the articles—an individual motivated by environmental and energy security concerns. One of the articles also discussed how people without their own roof could rent solar panels from a local energy company, which used the income from the rental business to develop novel technologies (68) (*Environmental, societal effect frame*).

### Prepper

The role of the prepper relates to households who prepare either for rising energy prices or electricity cuts. Electricity cuts were estimated to occur during winter season 2022–2023, and the authorities and the media frequently warned households to prepare for this eventuality (e.g., 193, 194, 198). Eventually, these cuts failed to materialize, partly due to the extensive energy-saving measures taken by citizens. The role of the prepper relates to the roles of investors and adaptors, as many of the articles on prepping also focused on acquiring as much firewood as possible for the winter (e.g., 192). Preppers were often also described as “energy self-sufficient” households, sheltering themselves from insecurity by increasing self-sufficiency in energy production, and thus, the role was also linked to the role of the prosumer described earlier (41, 63). Self-sufficiency was enhanced, in particular, through investing in energy production by procuring solar panels and heat pumps, but it was also promoted by reflecting on the energy use in homes and the ways to save energy most efficiently (e.g., 28, 40) (*Economic, lifestyle effect frame*).

### Innovator

Households’ role as innovators relates to individuals and families who develop social or technical innovations to save energy or improve energy efficiency. The role of an innovator was mentioned only four times in our data, although there were calls for innovations to promote energy transition from public figures, such as the owner of the Finnish energy company St1 Nordic, Mika Anttonen, in his *HS* column (39). These articles reported on a rather narrow category of households who had invented creative, mainly technical solutions to solve their energy problems, such as additional installations in their house’s energy system or efforts to share

electricity between neighbors (138, 175, 201) (*Economic effect frame*).

## Households as passive actors

### Customer

The most common passive household role was associated with households as mere customers of energy companies and payers of electricity, for whom the electricity just “comes from the socket” (22). These articles focused primarily on the negative financial consequences of the electricity crisis for households. Such households were described as “clients”, “customers”, or “payers for electricity”, who “need to settle for more costly electricity deals” (61, 86, 218). The articles discussed, for example, the shock that people would experience after receiving their next electricity bill, as they had not paid (nor had previously needed to pay) attention to the development of prices (8, 85). This understanding of passive customers follows the notion that consumers have been deliberately distanced from the energy system (e.g., Ryghaug et al. 2018) (*Economic, lifestyle effect frame*).

This consumer role also treats households as ordinary residents of a city or municipality, illustrated by stories on the amount “the residents of Helsinki” or a “homeowner in Kerava” would be forced to pay for their energy soon (2, 3). These articles discussed notions of equality between residents of different cities or municipalities, and how the residents were “at the mercy” of energy companies and their pricing policies (*Economic, moral effect frame*).

### Victim

A further passive role is that of households as a victims or sufferers of the energy crisis, rising energy prices or unfair policies, or that of energy poor or vulnerable households. Many of the articles described the suffering endured by households, citizens, Finns, and people in general. They focused, for example, on the limited ability of households to pay their energy bills, a situation that is rather novel in Finland due to long traditions of rather cheap energy and sharing energy costs collectively, the latter being a feature of housing cooperatives (see, e.g., Matschoss et al. 2013). Households were described as facing an “unsustainable”, or even “catastrophic” situation (92), with “palpitation-causing electricity bills” (137). In one of the articles (126), Pirkko, a retired veterinarian in her 60 s, described how she had lost sleep wondering how she would manage the winter electricity bill. Due to the rising energy prices, more than one-fourth of Finns were reported to be facing difficulties in meeting their housing-related costs (7) (*Economic effect frame*).

Households as victims were described as those were exposed to the risks of the market (139) and had learned the “real conditions of their electricity deals the hard way” (12). Interestingly, and in contrast to the saver role we described previously, some of the articles reported that energy use for heating could not be changed and, for example, indoor home temperatures could not be reduced after a certain point (18, 45). Homeowners with electric heating were identified as a group suffering particularly from the energy crisis, and it was noted how the crisis impacted households differently depending on their geographical location. These articles contained a clear energy justice aspect, describing how people, especially in rural areas, suffered from many injustices in their everyday life as they were required to meet both rising energy and fuel costs in addition to the omnipresent need to renovate their homes (20, 27, 219) (*Economic, lifestyle, moral effect frame*).

### Recipient of support

The role of a recipient of support refers to households who are the targets of government benefit mechanisms, such as tax rebates and incentives. Financial support from the government, discussed extensively in the media in autumn 2022 but already mooted in spring 2022, aims to help suffering citizens (122) or those “in plight” (124), thus linking this role to the role of victim. Government support, targeted especially at low-income households for energy-efficiency renovations or renewable energy investments, is designed to counter energy poverty while promoting the energy transition via environmental-friendly investments (24). When it comes to receivers of support, citizens were often mentioned as those whom the Government intended to assist with huge support packages to help them in their everyday lives (124, 127) (*Economic, environmental, lifestyle, moral effect frame*).

### Target of advice

The final category of passive roles was comprised of households as targets of advice that helped them compare electricity prices, save energy, or improve energy efficiency. Many of the articles described the energy-saving tips published by the European Commission together with the IEA in April 2022 and by the national energy-saving campaign, which was launched in October 2022, with some teasers already released earlier in the autumn. The intention of that advice was to “encourage” and “guide” citizens to use less energy (151, 187). Throughout the study period, *HS* published numbered lists of points to reduce energy consumption and thus achieve savings in energy bills (e.g., 71) (*Economic, lifestyle effect frame*).

Most of these tips were related to finding the most suitable or lowest-priced electricity deals (e.g., 1, 12, 167) or saving energy primarily by reducing heating by one degree to avoid power cuts in the electricity network, which was clearly the most popular piece of advice in our data (e.g., 43, 45, 49). These tips connected the role of households as targets of advice with those of the buyer and saver. The category was also linked to the role of citizens, as especially in the spring 2022, and regarding the IEA and EC energy-saving list, the aim of the advice was to “support Ukraine by reducing Europe’s dependence on Russian energy” (48). This category was thus a “meta-category”, as the advice given also dealt with, for example, ways to make modifications at home (investor) or shift the time of energy use (adaptor) (*Economic, societal, lifestyle, moral effect frame*).

The targets of such advice were often expected to become “enlightened” consumers who knew the “right thing to do” and only required a small nudge to implement the “few simple things” necessary to affect their own energy use or electricity bills—and reduce carbon emissions simultaneously (1, 48, 79). Household decision-making was supported by online calculators demonstrating the degree to which consumers could benefit by updating their electricity contract or reducing heating or hot water consumption when showering, for instance. In other words, although the target of advice is considered a passive role in our study, it also constitutes what we describe as a “meta-role”, as the expectation is that the tips and advice would lead to some form of activity in terms of changing electricity contracts or saving energy, for instance (*Economic, environmental effect frame*).

## Dimensions of agency attached to household roles

In this section, we collate the effect frames attached to the eight active roles of saver, investor, adaptor, buyer, citizen, prosumer, prepper, and innovator as well as the four passive roles of target of advice, customer, victim, and recipient of support (Table 3).

The effect frames reveal the different dimensions of agency attached to each role. The most prevalent frames were lifestyle and economic effect frames. The lifestyle effect frame highlights the personal nature of energy use and the everyday practices it enables, and this was seen, for example, in such roles as saver, adaptor, or target of tips, which focused on practical means to save energy in homes. In addition, in the role of recipient of support, agency was often framed in terms of support in everyday life, which illustrates the personal nature of such a role (124, 127). The societal, environmental, and moral effect frames were less prevalent, and, in general, household roles in relation to environmental effects were overshadowed by the price crisis and its effects on the everyday life of households. Societal and environmental frames were often attached to roles, such as prosumer and investor, who actively contributed to mitigating both the acute energy crisis and the longer term climate crisis through investments in technological development. The moral effect frame was highlighted, for example, in the role of the citizen: the responsibility and solidarity of citizens was clearly emphasized—while similarly referring to the suffering of Ukrainian civilians (50, 115). The moral effect frame also was attached to other active roles, such as that of the buyer when the act of purchasing was framed as “doing the right thing” in enabling the functioning of the energy system via monitoring and responding to electricity price fluctuations.

**Table 3** Summary of roles and effect frames characterizing various kinds of agency

Agency	Role	Effect frames				
		Economic (12)	Environmental (5)	Societal impact (7)	Lifestyle (11)	Moral (18)
Active	Saver	x	x	x	x	x
	Investor	x	x	x	x	
	Adaptor	x		x	x	x
	Buyer	x		x	x	x
	Citizen	x	x	x	x	x
	Prosumer	x	x	x	x	
	Prepper	x			x	
	Innovator	x				
Passive	Target of advice	x	x	x	x	x
	Customer	x			x	x
	Victim	x			x	x
	Recipient of support	x			x	x

The effect roles also reveal the complexity of the different agencies attached to the roles. For example, economic and lifestyle effects were often combined. This is illustrated in the role of the saver, where the economic and lifestyle effect frames were intertwined in frugal acts such as the use of wool socks. Similarly, in the role of the saver, environmental, societal, and moral effect frames were combined in media framings linking climate-related action with Ukraine (60). In turn, the role of the victim was framed from the perspectives of the economic, lifestyle, and moral effect frames, but not from the environmental or societal frames, suggesting that the crisis was seen particularly as an economic issue rather than an environmental problem.

When it comes to the distribution of effects between active and passive roles, almost all active roles were described through their societal effects, which was not the case for passive roles. Similarly, environmental effect framing was more strongly attached to active roles, while it was less present in passive roles, apart from the role of target of advice, in which environmental effects were expected to manifest if the advice provided in the articles was followed. The media adopted a moral perspective to both active and passive roles. There was, however, a difference in emphasis. Active roles were discussed especially in connection with Russia's invasion of Ukraine and its energy war on Europe, and, in these roles, we could identify the moral effect frames through references to solidarity with Ukrainian and European citizens. The measures to reduce reliance on Russia enjoyed high acceptance among Finnish citizens, a phenomenon that was also clearly present in our data, with many articles discussing energy savers, investors, and prosumers as patriotic citizens in the crisis. For passive roles, moral effect framing was visible in discussions on aspects of inequality linked with either the crisis or its mitigation, such as the fair allocation of government support. In sum, passive roles were often described from a negative perspective.

## Discussion

Recent research has acknowledged the importance of the everyday actions and behavior of individuals as enablers of sustainability transitions (e.g., Huttunen et al. 2021). Our research focused on examining how the media frames the agency of households during an energy crisis, acknowledging the role of the media as a forum in which public discourse on current issues is manifested (see Ganowski and Rowlands 2020). By interacting with the media, people build opinions and construct meaning on various issues (e.g., Olausson 2009). Media framings thus influence the kinds of societal roles individuals assume they can and are expected to adopt in the energy system (see Entman 2007; Lukkarinen et al. 2022).

In terms of sustainable energy transitions, we identified many linkages between household agency and transitions, for example in cases where the actions of households as savers or investors were linked to both the societal and environmental effects of mitigating the energy crisis and promoting the energy transition. However, we also identified opportunities where the media could have highlighted the impact of households' actions on the environment or sustainability but failed to do so. For example, in the news articles discussing households as buyers, opportunities to support renewable energy production, for instance through selecting contracts for wind energy, could have been actively raised, pointing to the links between household agency and its environmental effects. Nevertheless, even active roles were seldom attributed to any radical transition agency: the most common discussions relating to the roles of saver and investor, for example, concerned reducing indoor temperatures by one degree, insulating windows, or avoiding the excess use of hot water. From the perspective of energy transitions, these are welcome but not particularly radical actions. In a crisis, however, they can strengthen households' sense that they can act to improve their financial position and teach them novel ways to save energy (see Laakso et al. 2021a), which can be the first step toward a more profound and permanent change in their energy behavior.

In general, the effect frames attached to the agency of passive roles were more negative and less varied than those assigned to active roles: the roles of customer or recipient of support provoked narratives of households' inability to act for change (see Lennon et al. 2019). Moreover, these roles did not include purposeful action to create or prevent change in the sense of Fischer and Newig (2016). Nevertheless, even households with passive roles were not seen as altogether without agency, as they were expected to act as users, clients, or residents of a city who must adapt to their given situation. Our findings also highlight a distinction in the character of consumers depending on whether the media treated them as playing a passive or active role: as the active roles of buyer or investor, among others, illustrate, households are not simply passive clients of energy companies or the targets of policies; rather, they can choose the most suitable energy contracts and take advantage of government-sponsored financial support by renovating their homes or investing in renewable energy (see Schot et al. 2016). Therefore, when formulating recommendations in various transitions studies for energy policy, it might be useful to treat households as possessing active agency, even though they might appear to lack the prosumer or innovator role that often seems to be expected of households in the literature on energy transitions (e.g., Bauwens et al. 2022; Szulecki 2018; Szulecki and Overland 2020).

Our findings, furthermore, complement the understanding of households and their roles seen in the literature on

energy transitions. We were able to identify the roles of consumer, prosumer, and investor most anticipated in the transitions literature (see Jalas et al. 2017; Szulecki 2018), but these roles were supplemented by many roles identified in other research fields: the role of a victim or a subject of unfair actions, as suggested in the literature on just transitions (e.g., Heiskanen et al. 2021), the roles of customer, buyer, and target of advice—suggesting the idea of a rational consumer as a target of information provision and nudges (e.g., Heiskanen and Laakso 2019)—as well as the roles of saver and adaptor familiar from practice-theoretical studies on innovations and experimentation in everyday life (e.g., Jalas et al. 2017). Our findings broaden the transitions literature’s focus on users (see Schot et al. 2016), as not all household roles involve the use of (novel) technologies. Moreover, in our data, discussion of households as users was absent, apart from households as consumers of energy. Due to the inherent agency of households, transition studies should not, therefore, exclude households as an actor group, regardless of whether they are viewed as active agents of change or passive sufferers. Moreover, in our data, many roles occurred in parallel, and their agencies were attached to various framings, which illustrates that the understanding of households in transitions research has been rather simplistic and narrow. To better understand households as agents of change in energy transitions, their roles thus merit further elaboration.

An issue absent from the data was discussion of individual household members and households’ internal roles—a discussion that is also lacking in energy transitions research (Raven et al. 2021). Moreover, the paucity of the innovator role in our data was also surprising. In the literature on experimentation and practice-based design (e.g., Scott et al. 2012), households are considered important sources of (social) innovation. It might be that early stage innovations are discussed in other (predominantly digital) environments, such as Internet forums, and that those innovations become the topic of traditional media discussion at a more mature stage (Hyysalo et al. 2013). Perhaps, if this research were repeated later, it could potentially identify new and more innovative household roles. For instance, a news article in *HS* at the beginning of February 2023 described at length the ways in which some households had reduced their energy consumption by as much as three quarters compared with their consumption the previous winter by implementing significant changes in their everyday life (HS 2023).

While our analysis provides a broader typology of household roles compared with previous research, and thus offers new ways to approach household agency in transitions research, it nevertheless contains some limitations. Probably, due to the rather short time frame of the research, we were unable to identify any apparent developments in the prevalence of roles in the data, although one

might assume that the role of citizen was more common immediately after the Russian attack on Ukraine and that the role of saver became more apparent toward the winter. Moreover, we were unable to link the prevalence of roles to any other significant energy-policy events that occurred during the study period, which might not necessarily be a limitation but evidence of the prevalence of a variety of household roles not only in times of crisis but also during the on-going, long-term energy transition. The development of roles and their constellations and framings should be studied in a timeframe of years and decades rather than months (e.g., Bolsen 2011) to help verify our findings. We were able, however, to identify interesting changes in the framings related to, for example, spot-priced electricity. While in winter 2021–2022, the articles reported a shift away from spot-price contracts due to rising electricity prices and households’ need for predictability, in autumn 2022, the discourse changed, and the media began to discuss the positive economic effects of spot-price contracts and demand-side management. From the perspective of the energy transition, this is a welcome change toward more active energy management in households, and it will be interesting to see how this narrative develops. As noted by Wittmayer et al. (2017), it would be valuable to study the ways the roles themselves are “in transition”, which would also require longer term analysis.

Another methodological choice was to exclude articles on household energy use outside Finland during the crisis and to focus on consumer roles within the Finnish context and from only one media outlet. One interesting area for further research would thus be to analyze the roles assigned to households in different geographical and cultural contexts, post-crisis, and by other actors than the media, which would also further test the typology we created based on the Finnish media discussion. Furthermore, as our analysis was limited to individuals as household(er)s, further research could address the other roles and agency individuals can adopt in energy transitions as experts, politicians, employees, and activists, to name but a few. The agency of households could also be compared with the agency related to these other roles or with the agency of altogether other kinds of actors, such as businesses, intermediaries, or public authorities. Our analysis was able to identify some collective features, especially in the roles of the prosumer and investor in the context of housing cooperatives, but this topic would also merit further study. In addition, future research could provide a more sophisticated picture of the effect frames. For example, the moral dimension of various household roles can be globally, nationally, or locally oriented or it can highlight households’ moral agency to act more sustainably or patriotically depending on the circumstances, which would warrant more research.



## Conclusions

This research set out to investigate different household roles and the agency attached to these roles by analyzing a total of 220 articles in a Finnish newspaper, *HS*, between November 2021 and October 2022. The aim was to examine whether households were treated as active change agents or mere passive victims at the time of a European energy crisis that was expected to accelerate the on-going energy transition, thereby revealing underlying expectations regarding households in the energy transition. We identified eight active roles—saver, investor, adaptor, buyer, citizen, prosumer, prepper, and innovator—as well as four passive roles: target of advice, customer, victim, and recipient of support. Moreover, we discussed the agency attached to these roles in the media with the help of effect frames adapted from Bolsen (2011).

Our contributions to energy transitions research are threefold. First, we presented a systematic typology of household roles based on media expectations, providing a broader understanding of the household roles highlighted in public debate than has been offered thus far in the transitions literature. Second, the qualitative evaluation of agency attached to each role provides an initial understanding of the dimensions of the effects of the agency attributed to these roles and demonstrates, for example, that households are not viewed simply as active or passive actors in transitions; rather, they are often seen as occupying the middle ground between these two extremes or simultaneously playing the roles of active change-makers and passive victims. Thus, the study offers a more nuanced understanding of household agency in transitions. Third, our study highlights that agency is not only purposeful action; instead, passive roles can also exert effects that are relevant to transitions—an observation that merits further attention.

## Appendix 1: Media references

News articles used in the analysis (date, headline, section/subsection, URL). All the following news articles have been published by *HS*. The news articles in **bold** are those cited in this article.

1. **2021-11-07** Viime syksynä kiinteähintaisen sähkösopimuksen olisi saanut halvalla—Kuinka paljon sähkösopimuksen kanssa voi kikkailla? Economy|Electricity price, URL: <https://www.hs.fi/talous/art-2000008343667.html>
2. **2021-11-18** Sähkösiirron hintaerot paisuvat entisestään—Keravalla omakotiasukas maksaa siirrosta jo 900 euroa vähemmän kuin kalleimmassa yhtiössä ja hinta laskee edelleen, Economy|Energy, URL: <https://www.hs.fi/talous/art-2000008411956.html>
3. **2021-11-30** Uudet tiedot: Helsinkiläisten kaukolämpölasku nousee talvella voimakkaasti viime vuoteen verrattuna, City|Energy, URL: <https://www.hs.fi/kaupunki/art-2000008439317.html>
4. 2021-12-08 Tapio Mehtonen näki sähkön ennätyshintojen vain nousevan, ja lopulta oli tehtävä päätös:”Laskin, että minulle voisi tulla yli tuhannen euron sähkölasku”, Economy|Energy, URL: <https://www.hs.fi/talous/art-2000008456911.html>
5. 2021-12-09 Astianpesukoneen pyöräytys puolitoista euroa, saunan lämmitys pitkälti yli kymppin—HS:n laskuri näyttää, mitä mikäkin maksaa sähkön ennätysshinnoilla, National|Electricity, URL: <https://www.hs.fi/kotimaa/art-2000008460734.html>
6. **2021-12-13a** Euro ohjaa energiamarkkinoita tarkemmin kuin politiikka, Editorial|Editorial, URL: <https://www.hs.fi/paakirjoitukset/art-2000008464938.html>
7. **2021-12-13b** Nordea: Energian kallistuminen nostaa asumisen kustannuksia, osakeasujille on ensi keväänä tiedossa”ikävä yllätys”, Economy|Houses, URL: <https://www.hs.fi/talous/art-2000008467060.html>
8. **2021-12-14** Sähköyhtiöillä on nyt vastuunkannon paikka, Economy|Comment, URL: <https://www.hs.fi/talous/art-2000008470618.html>
9. 2021-12-15a Sähkön hinta huutelee ennätöksissä—Näin yhtiöt joustavat pörssisähkösopimuksissa, Economy|Energy, URL: <https://www.hs.fi/talous/art-2000008474402.html>
10. **2021-12-15b** Huonosti eristetyt rakennukset saavat huutia EU-komissiolta, joka patistaa jäsenmaita remontoimaan energiasyöppöjä taloja, Politics|Energy policy, URL: <https://www.hs.fi/politiikka/art-2000008478010.html>
11. 2021-12-31 Lämpö ei heti lopu lakon takia tehdaskaupungeissa, mutta kustannusten nousu huolestuttaa, Politics|Labor market, URL: <https://www.hs.fi/politiikka/art-2000008511555.html>
12. **2022-01-10** Sähkösopimusten hinnat nousevat, ja moni kuluttaja on ymmällään vaihtoehtojen kanssa – mitä kuluttajan kannattaa nyt valita? Economy|HS analysis, URL: <https://www.hs.fi/talous/art-2000008517118.html>
13. 2022-01-17 Yllättävä lakimuutos tekee aurinkopaneeleista monille taloyhtiöille kannattavia, Economy|Energy crisis, URL: <https://www.hs.fi/talous/art-2000008520691.html>
14. 2022-01-20 Kotitalouksien sähkölasku nousi viime vuonna jopa yli 35 prosenttia—sopimusten tarjoushinnat saattoivat nousta jopa yli 100 prosenttia,

- Economy|Energy, URL: <https://www.hs.fi/talous/art-2000008550162.html>
15. **2022-01-26** Monien suomalaisten sähkölasku lähestyi joulukuussa 2 000:ta euroa—”Pörssisähkö on sähkön oikea hinta”, sanoo 1 600 euron laskun saanut Erkki Thuneberg, Economy, URL: <https://www.hs.fi/talous/art-2000008548915.html>
  16. 2022-01-31 Parhaita timanttijuttuja: Koti on täynnä sähkösyöppöjä, mutta osa sähkönsäästökeinoista on täysin turhia—näillä keinoilla säästät laskusta pitkän pennin, Economy|Energy crisis, URL: <https://www.hs.fi/talous/art-2000008541163.html>
  17. 2022-02-02 Helsinki antoi ensimmäisenä Suomessa taloyhtiöille luvan rakentaa maalämpökaivojaan myös kaupungin maille, City|Construction, URL: <https://www.hs.fi/kaupunki/art-2000008582825.html>
  18. **2022-02-08** Polttakaa öljyä, suositteli energiayhtiökin, kun rivitalon lämmityslasku nousi pilviin—“Sehän on ihan kohtuutonta”, National|Energy; URL: <https://www.hs.fi/kotimaa/art-2000008594262.html>
  19. 2022-02-09 Näin puolueet tukisivat bensiinin hinnannoususta kärsiviä—vain kolme ryhmänjohtajaa epäroin tukien tarpeellisuutta, Politics|Parliament, URL: <https://www.hs.fi/politiikka/art-2000008594388.html>
  20. **2022-02-10** Ministeri Emma Kari: Vähävaraisille tukea kotien energiauudistuksiin—”Energia remonttien avulla voidaan välttää yllättävät, ylisuuret lämmityslaskut”, National|HS Environment, URL: <https://www.hs.fi/kotimaa/art-2000008595204.html>
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  22. **2022-02-12** Ilmastonmuutoksen takia ei kannata vaipua alakuloon, sanoo professori —”Erittäin nuorten pitäisi saada kokea ilmastopositiivisuutta”, National|40-years-old, URL: <https://www.hs.fi/kotimaa/art-2000008597586.html>
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## Declarations

**Conflict of interest** The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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