“Where no one is poor, and energy is abundant”

A study of energy poverty in Norwegian households

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Abstract

Almost 50 million EU citizens are affected by energy poverty, which is generally defined as inadequate use of domestic energy services. However, while extensive research has been conducted on the implications that some dimensions of energy poverty, such as high energy costs and cold homes have on households in the EU, very little is known about this in the context of Norway. Norway is one of the most income-equal countries in the world as well as a country with historically low electricity prices. Despite this however, if some Norwegian households continue to live in energy poverty, they may endure the double trauma of being energy poor while not being recognized as such. The aim of this qualitative study is to explore how Norwegian households experience, cope and make changes in response to energy poverty, from changing their use of energy services to maintaining social relations and a preferred lifestyle. The main research question guiding the thesis is: how do vulnerable households in Norway experience energy poverty in everyday life? The data material for the study was collected through semi-structured interviews conducted with 18 members from 17 households experiencing energy poverty. The interviewees were recruited using a variation of recruitment approaches, such as gatekeepers, snowballing and hand-picking cases. Findings are analyzed and discussed drawing on concepts from practice theory. The study finds that lack of financial independence, social capital in the form of family, social and material dimensions to housing and energy consumption as well as normative expectations of energy use have implications for how energy poverty is experienced by households. Most interviewees have little perceived agency to ameliorate their situation. A group of younger interviewees feel marginalized having to limit energy use extensively, cut food costs, rely on financial support from parents and isolate themselves to pay high energy costs in the colder months. They feel unable to live “normal” lives and struggle with feelings of shame, embarrassment, and stigma. A group of older interviewees are less vulnerable having more stable sources of income, drawing on cheap or free firewood as well as having stronger social capital in the form of their children. This group primarily struggles with maintaining an adequate indoor temperature and rarely mentions making sacrifices in other areas. Rather, these interviewees express having learned to live within the boundaries of their financial means and having found strength in careful management of their financial means.

Key words: energy poverty, consumption, energy services, Norway, practice theory, normality, poverty, vulnerable households.

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1 Introduction

In the spring of 2018, the Norwegian parliament debated further integration of the Norwegian energy market with the EU energy market by implementing the legislative framework of the EU's third energy package. The package caused a polarizing debate, notably due to disagreements regarding the executive power of the Agency for the Cooperation of Energy Regulators (ACER), established to draft guidelines for cross-border energy infrastructure and resolve disputes between national regulators (European Commission 2020b). Proponents of the third energy package argued that increased cooperation and energy exchange with the EU is crucial to reduce carbon emissions and increase national energy security, while opponents argued that the package would effectively give the EU sovereignty over Norwegian energy resources as well as "import" of higher energy prices from EU countries that Norwegian households would have to pay. While the third energy package was passed in the Norwegian parliament, the organization *Nei til EU* (No to the EU) has since sued the Norwegian government. At the time of writing this thesis, the case is to be taken up in the Norwegian supreme court.

At the time of the "ACER debate", I was doing an internship in the European Movement Norway (Europabevegelsen), a proponent of the third energy package. The package had already been in force in the EU since 2009, so I was skimming through recent EU policy proposals to understand the contemporary energy policy since launched by the EU. After countless pages of directives and EU targets on technical subjects on the design of the electricity market and the transition towards a carbon neutral energy market, I suddenly stumbled upon a term that I had never seen before: energy poverty. I was surprised to learn that almost 50 million EU citizens are affected by energy poverty, a situation defined as when "individuals or households are not able to adequately heat or provide other required energy services in their homes at affordable cost" (Thomson and Bouzarovski 2018). I was further surprised to learn that policy on energy poverty was already present in the third energy package something which that had not been mentioned even briefly by neither proponents nor opponents during the "ACER debate", despite the debate revolving around whether the package would lead to higher energy costs for the *average* Norwegian household. I remember thinking that perhaps 'energy poverty' was not a useful term for political communication in Norway. Perhaps it did not seem likely to occur here, in one of the wealthiest countries and

largest producers of hydropower globally (Statista 2020; World Bank 2020). But what do we *know* about energy poverty in Norway, I asked myself? After leaving the European Movement Norway, I was enrolled in a master's program and decided to explore what it is like to experience energy poverty in Norway.

1.1 Unexplored territory: Energy poverty in Norway

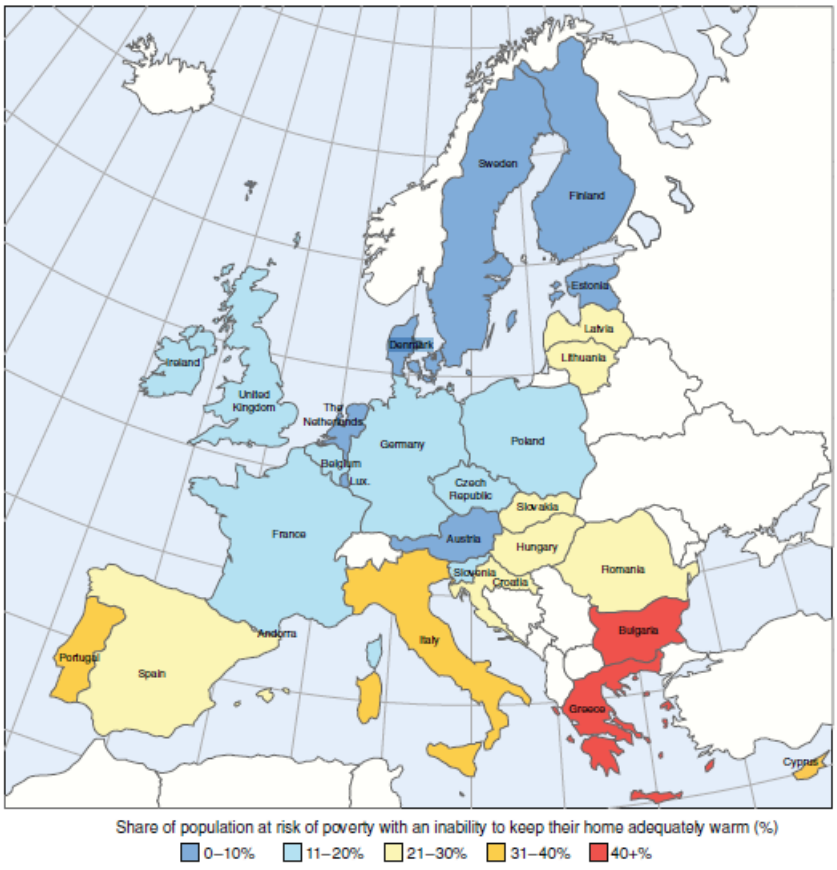
Energy poverty is a multifaceted phenomenon (Bouzarovski 2018). It refers to inadequate use of energy services, for example involving inadequate heating or cooling of homes due to a combination of low incomes and energy inefficient dwellings (OpenExp 2019). Energy poverty was first acknowledged by EU institutions with the proposal of the third energy package in 2007 (Bouzarovski, Petrova, and Sarlamanov 2012). The package identifies energy poverty as a growing problem and requires that member states identify households that are vulnerable to energy poverty and develop measures to address these vulnerabilities, for example by energy-efficiency improvements of housing or social benefits that guarantee that vulnerable households have the capacity to use energy at adequate levels (Boardman 2010; Pye et al. 2015). Since 2007, the EU has come to include measures to combat energy poverty in the Clean Energy Package[1] and the Energy Union (Bouzarovski 2018) which aims at transitioning into a low-carbon energy system in Europe to provide "secure, sustainable, competitive and affordable energy" (European Commission 2020a). Additionally, the EU Energy Poverty Observatory was established in 2018 to "improve the measuring, monitoring and sharing of knowledge and best practice on energy poverty" (EU Energy Poverty Observatory 2020).

The almost 50 million EU citizens who are affected by energy poverty follow a strong geographical pattern as illustrated by Figure 1. Typically, North-West-European countries suffer the least from energy poverty, while south-eastern countries suffer the most (Bouzarovski 2018). However, in the context of research on energy poverty in Europe, Norway is generally unexplored territory. There are at least three probable reasons for this. First, energy poverty is not a topic in Norwegian energy policy. Second, when it comes to EU

[1] The Clean Energy Package is a policy framework involving a stronger role for the ACER, governance of the energy market. the energy performance of buildings, monitor energy poverty in Europe as well as targets for energy efficiency and the share of renewable energy in the energy mix. For more information: https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans_en (Accessed 13.06.2020).

energy legislation, Norway is a decade behind as the third energy market package has only been effective in Norway since November 2019 (Europalov 2020). Third, being an EEA country[2], Norway is often exempt from statistics and reports on energy poverty in the EU. The little information that exists is largely restricted to reports where Norway sometimes, but rarely, is included. Even when it is, the presence of Norway in these reports is mostly limited to single statistics and indicators.

Figure 1: Geographical patterns of energy poverty in the EU



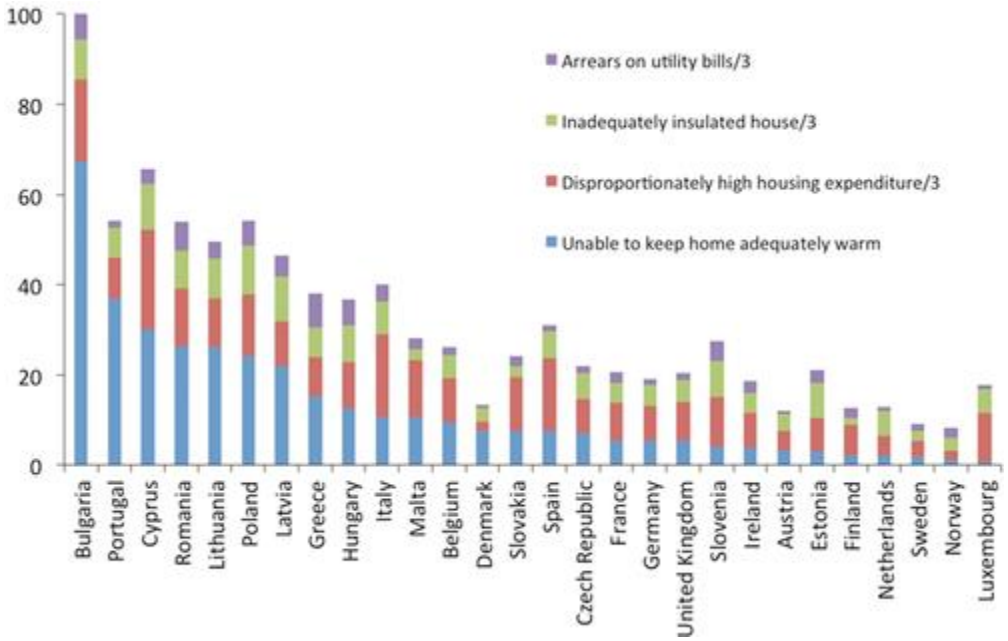
From: Dobbins et al. 2019, 3

When Norway is included in reports, the country typically performs well on indicators related to energy poverty. Figure 2 shows that Norwegian households had the least problems of 28 European countries related to paying the utility bills, the energy efficiency of the home, heating the dwelling and energy costs based on statistics from the 2000s (Bouzarovski 2014). In one report, only 0.3% of Norwegians were seen as unable to heat their home in 2013, a

[2] Having signed the EEA Agreement, Norway is partially a part of EU's internal market and must follow certain, but not all, EU legislation.

lower proportion than in 32 European countries (EPSU and EAPN 2017). According to another report, Norway performed second best among 34 countries on two indicators: 0.9% percent of Norwegians had difficulty staying warm and 2.4% were behind on paying the electricity bills in 2016 (European Energy Network 2019).

Figure 2: The performance of European countries on a composite indicator of four indicators of energy poverty



From: Bouzarovski 2014, 283

While these statistics harmonize by indicating that the prevalence of energy poverty is low in Norway, the reports rarely discuss Norway as a case. We find a rare exception in a study by Bollino and Botti assessing energy poverty in Europe according to energy affordability and energy efficiency (2017). Although categorizing Norway as a low energy poverty country, they write: "[r]emarkably, living in various Scandinavian countries (Denmark, Norway and Iceland) is associated with a rather poor performance in terms of energy poverty, comparable to that of countries traditionally exposed to relatively notable shares of energy deprivation*"* such as France, Belgium and the UK (Bollino and Botti 2017, 499). However, the authors do not discuss why Norway's performance is poor relative to these countries. In sum, the lack of research on energy poverty on Norway give ground for conducting such research. Another reason to explore is provided by a study on energy poverty in the EU that argues (Maxim et al. 2016), by drawing on Brunner, Spitzer and Christanell (2012), that energy poverty might be difficult to identify in countries where there is a stigma associated with being labeled as

"poor" or where households adopt lifestyles that might be perceived as "inadequate" by others. This might be the case in Norway, one of the wealthiest countries in the world.

1.2 "Where no one is poor and energy is abundant": A peek behind the curtain

Norway is one of the most happy countries in the world, as measured by the World Happiness Report (Sustainable Development Solutions Network 2020). Reasons for this are that Norwegians have high levels of freedom, social support, and life expectancy. Additionally, Norway is one of the most income equal countries in the world (OECD 2020) with a gross domestic product per capita 51% larger than the EU average (SSB 2020a). The relative wealth of Norwegians is reflected in the fact that Norwegians spend a larger share of their income on culture and spare time activities than the EU average, but less on basic necessities such as food (SSB 2019a). For reasons such as these, one researcher referred to Norway as "A Society without Poverty" in the title of an article in the 90s (Van Wormer 1994).

Norwegians believe that Norway is a socio-economically equal society, according to a study (Gubrium 2015a). Apparently, Norwegians assume that a strong welfare state will take care of those in need and that poverty is caused by individual shortcomings rather than structural factors. Norwegians in need may receive support, but they must ask for it. Therefore, those who might live in poverty are perceived as having chosen not to ask for support. However, as another study by the same author observes, those who experience poverty in Norway have been increasingly marginalized in recent times (Gubrium 2015b). While the incomes of the 10% least affluent have been gradually decreasing since the 80s, the opposite is the case for the 10% most affluent (SSB 2019a). In total, 10% of Norwegians have persistent low incomes, a problem that has been growing since 2011 (SSB 2019a). For those experiencing financial problems, welfare problems related to employment, health, social relations and housing tend to accumulate (Barstad 2015). Generally, the more the problems, the less satisfied people are with their life. In these respects, the unemployed and those suffering from a physical or mental disability are overrepresented. In 2018, there were nearly 340 000[3] recipients of permanent disability benefits (uføretrygd) in Norway – about 10% of the

[3] Be wary that there may have been considerable changes in several statistics presented in this chapter following the extraordinary circumstances of covid-19 which arrived at the end of writing this thesis.

population of working age (SSB 2019a). In addition, there were over 133 000 recipients of other social benefits (SSB 2019a).

Two thirds of the wealth of Norwegian households comprises of their dwelling (SSB 2019a). While Norwegians have a strong tendency to own their home, only 23% rent (SSB 2019a). There are large differences between rents in the districts and in cities, with the capital of Oslo being the most expensive place to rent in Norway – almost 75% more expensive than the national average (SSB 2017, 2019b). There are also considerable differences within cities, with West-Oslo typically being more expensive than East-Oslo. Furthermore, short term tenancy has dominated the market for years, something which is associated with higher rent prices as new rental contracts are often considerably higher in price than older ones (SSB 2017). Notably, 21% of all households are considered to have high housing expenses and 24% cannot service an unexpected expense (SSB 2020c).

Norway has one of the highest levels of domestic electricity consumption in the world – only beaten by Kuwait in 2012 (Bøeng 2014). Electricity use makes up approximately 80% of domestic energy consumption (SSB 2014). Firewood, a fuel carrier about half of Norwegian households may heat with, comes in second with a share of 12% (SSB 2018a). One of the reasons for the high levels of electricity consumption is that electricity prices in Norway have historically been one lowest in Europe (Bøeng 2014). An important reason for low prices is that Norway has a large share of hydropower in its energy mix – 95% in 2018 (SSB 2020b; Westskog and Winther 2014). However, electricity prices tend to fluctuate according seasonal variations in demand as mentioned above. About 54% of electricity use in buildings is used directly for heating purposes – including space and water heating (Spilde et al. 2018) and the need for space heating in Norway rises considerably during the colder seasons (Halvorsen 2012). Consequently, domestic energy use fluctuates largely throughout the year, peaking during the winter (SSB 2018b). However, while energy consumption may be predicted to rise during the colder seasons, the actual amount of energy for space heating varies greatly from year to year. For example, in 2001 households were using 55% more electricity for space heating compared to what was the case in 1990 and 2006, respectively (Dalen and Larsen 2013). These variations may be explained by factors such as outdoor temperatures, energy prices and use of heating.

The total domestic energy consumption has increased over the past three decades due to increased wealth as well as growth in population and in the number of households (SSB

2019a). However, the average annual electricity used by Norwegian households decreased from 18 000 kWh to 16 000 kWh from 1993 to 2017 (SSB 2018b). This trend has occurred in tandem with reductions in the total energy consumption per household counting other fuel carriers as well (Bøeng 2014). At the same time, the amount of electronic equipment in Norwegian households such as smart phones and TVs, tables and kitchen equipment has increased substantially, (Dalen and Larsen 2013). Important reasons underlying the reduction in energy consumption per household are milder climate, increased domestic investments in energy efficiency and heating pumps as well as electricity prices rising consistently since the early 2000s. Notably, households eager to improve the energy efficiency of their home, may apply for financial subsidies to install energy efficient technology or insulate their home through the public initiative ENOVA. In 2019, ENOVA supported 20 000 energy efficiency projects in Norwegian households with a budget of over 33 million EUR (ENOVA 2020). However, in a rare study evaluating the social implications of energy policy in Norway from 2006 (Anker-Nilssen), it was argued that the initiative is socially regressive – only being given to owner-occupiers and, currently, only covering up to 25% of the total investment. Anker-Nilssen further argues that the energy consumption of low-income households fluctuates to a greater degree according to outdoor temperatures than that of high- and middle-income households. While low-income households may have to reduce energy use to service high energy costs during the winter, middle- and high-income households have the financial capacity to invest in energy efficiency measures such as those ENOVA supports as well as use electricity in the colder seasons without being as conscious of costs.

The Norwegian electricity market was deregulated in 1991. Consumers may, therefore, choose their preferred electricity supplier and contract. A majority of 77% of Norwegian households have spot pricing contracts (SSB 2020d). These are generally considered the cheapest contracts in the long term but involves prices that may fluctuate daily. Additionally, 20% have more expensive variable electricity tariffs set by the supplier that fluctuate less frequently than spot prices. Only two percent of Norwegian households have the stable (but most expensive) electricity costs of fixed price contracts (SSB 2020d). Social tariffs for low income households who struggle managing cost fluctuations do not exist (Winther and Bouly de Lesdain 2013). While the contracts determine the electricity price per unit consumed, consumers also pay a grid tariff to the local grid company for transporting the electricity home and maintaining the grid Grid companies have monopoly in the region they operate: therefore, consumers cannot choose between grid companies. Grid companies are regulated

by the Norwegian Water Resources and Energy Directorate (NVE), but the exact grid tariff is determined by the grid companies. Notably, they may in each case increase the grid tariff per unit consumed if a household reduces its electricity consumption to cover costs of running and maintaining the grid (NVE 2015a). However, this does not happen if the total domestic energy consumption falls. On top of the electricity and grid costs, consumers must pay several fees, for example to fund ENOVA and value added tax. The size of these are relative to the amount of kWh consumed each month. Costs related to electricity, the grid and fees are billed all together. Although the size of the bill is subject to seasonal variations, each of the three costs typically make up a third of the electricity bill (NVE 2015b).

There is considerable dissatisfaction with electricity contracts and suppliers among consumers in Norway. In 2018, marketing and sale of electricity generated the most complaints from Norwegian consumers (Forbrukertilsynet 2020). While 21% of households changed electricity supplier over the course of 2019 (NVE 2020b), the Norwegian Consumer Council (Forbrukerrådet) has accused electricity suppliers of aggressive marketing and systematically "fooling" consumers by hiding additional fees and switching consumers to more expensive deals without proper notification (Forbrukerrådet 2020).

"Processes of structural change in the energy sector [have] been known to increase inequality and deprivation" (Bouzarovski 2018, 23). The shift to a deregulated sector constitutes one such structural change. Today we see several such processes in Norway: some examples are the electrification of fossil-based technology such as cars, the digitalization and smart metering of energy consumption, carbon-pricing of fossil-based electricity and new offshore cables being built integrating the Norwegian and European energy market. In a more recent report published by NVE, the authors write that electricity prices may continue to rise towards 2030 due to carbon pricing and European integration (Amundsen and Holm 2018). At the same time, NVE expects total electricity use to rise and has proposed an electricity tariff structure that causes electricity prices to rise when the grid capacity is low. The intention is to incentivize consumers to even out their energy consumption throughout the day to reduce total energy consumption during peak hours such as the evening. While the processes described here might be indispensable to improve energy efficiency and tackle climate change, it is crucial that vulnerable households who are unable to make the right choices and participate in the transition to a low-carbon society are not victimized in the process (NVE 2020a). Anker-Nilssen observed already in the 2000s that deregulation, increased trade with

Europe and carbon pricing caused higher electricity prices, something he argued disproportionally affected less affluent households in Norway (2006). Anker-Nilssen further argued that in a cold country like Norway, one must consider the implications that energy and climate policy have on the wellbeing and social life of less affluent households. Resonating with his argument, 14 years later, I argue that it is crucial to research how households living in energy poverty struggle reaching materially and socially necessary levels of energy use in order to avoid further marginalization while transitioning into a low-carbon society. If we disregard energy poverty in a wealthy and "energy rich" country like Norway, we risk inflicting upon households the double trauma of being energy poor while not being recognized as such.

1.3 Aims and research questions

In this thesis, I will analyze the experiences of Norwegian households living in energy poverty. My aim is not to objectively assess what causes energy poverty in Norway or monitor how much energy Norwegian households consume for certain energy services. Rather, it is "the utility and satisfaction received by the final user" of energy that will be in focus and the context in which households living in energy poverty find themselves (Bouzarovski 2018, 15). I acknowledge that energy is an essential good used to provide essential services such as warmth, lighting and hot water (Boardman 2010). I will therefore explore how households experience use (or the inability unable to use) energy services to achieve satisfaction and comfort. As such, I will explore what energy poverty means from the perspective of households. In other words, I seek to get an understanding of "what it is like" to live in energy poverty in Norway.

Bouzarovski writes that there is "uncertainty over the manner in which energy poverty both affects and is reflected in household consumption practices" (Bouzarovski 2018, 3). Much more has been said about the technical factors such as the energy-efficiency of the home and households' energy costs and income (Longhurst and Hargreaves 2019). Therefore, the general aim of the thesis is to explore *how* households make changes in their daily life in response to experiences with energy poverty, from problems related to paying electricity bills and heating adequately to maintaining social relations and a preferred lifestyle. As such, I conceive the lifestyle of households as constituted of various practices – related and unrelated to energy – performed for various reasons. To analyze these, I will draw on concepts from

practice theory in order to understand the social and material context in which practices are performed, the competences and knowledges used in practice as well as the meanings and emotions experienced by the households in relation to practices (Shove, Pantzar, and Watson 2012). Additionally, I will explore the interviewees' situation relative to other households, institutions and social spaces in order to analyze whether and how households living in energy poverty perceive themselves as possessing the agency necessary to make changes, adapt and influence their situation. To explore these topics, I have conducted qualitative interviews with 18 members of 17 households who have experiences with energy poverty. I have approached them as practitioners who experience and cope with energy poverty in different ways. As such, they are sources of information on how and why energy poverty affects practices as perceived from the perspective of the practitioner – not technical assessments of how energy poverty "really" affects them. This perspective is important because energy poverty is ultimately to the dissatisfaction of the energy user.

The research question guiding the study is: *How do vulnerable households in Norway experience energy poverty in everyday life?* Furthermore, the research is guided by two sub-questions: How do vulnerable households cope with energy poverty? How does energy poverty have implications for the social and human wellbeing of households? By exploring these questions, I will discuss what it means to be a vulnerable household living in energy poverty in Norway.

The master's thesis is divided into nine chapters. Chapter 2 provides a review of the literature on energy poverty, including definitions of and causes to energy poverty as well as vulnerable households. Chapter 3 presents the theoretical framework. Chapter 4 presents the methodology applied and ethical considerations that went into conducting the study. Chapters 5 to 7 present the findings of the study thematically: housing and finances; the vulnerable energy consumers; experiencing and coping with energy poverty. The latter of these chapters is dedicated to the two sub-questions. Chapter 8 analyses the findings by drawing on the theoretical framework and no relevant examples from the research on energy poverty. Chapter 9 summarizes and concludes the study, offering suggestions for further research as well as outlining implications for policy.

2 Energy poverty in the literature

In this chapter, I will give a brief overview of the existing research on energy poverty in the Global North. In doing so, I will focus on certain topics, such as definitions and causes of energy poverty, demographic groups considered vulnerable and how households cope with energy poverty and health implications. Additionally, I will provide an understanding of energy poverty as a complex and multifaceted phenomenon which cannot be fully understood in techno-economical terms without considering who the households consist of and the context that these households find themselves in.

2.1 Short history of the research on energy poverty

Energy poverty has been a recognized concept for over 40 years. However, it was Brenda Boardman's seminal book *Fuel Poverty* published in 1991 that caused a "watershed moment" for worldwide recognition (Ambrose and Marchand 2017, 875). Despite decades of research, Bouzarovski writes that "global issues of energy equity have been historically considered within two relatively separate scientific and policy registers" (2018, 12) leading to a "developed-developing world cleavage". (2018, 13) Generally, the cleavage amounts to research and policy in the Global South preoccupying itself with *access* to electricity, while in the Global North, where most households are connected to a power grid the *affordability* of energy has received more attention (Bouzarovski 2018). These differences have traditionally been termed 'energy poverty' and 'fuel poverty' by researchers of energy deprivation in the Global South and North respectively (Bouzarovski and Petrova 2015). However, following Bouzarovski and Petrova's claim that "all forms of household-scale energy deprivation share the same consequence: a lack of adequate energy services in the home" (2015, 33), it is becoming increasingly common to use 'energy poverty' across to the board (Day, Walker, and Simcock 2016). In line with this claim, 'energy poverty' will be the preferred term for the present study.

Within the Global North, the UK has been at the forefront of research since the publication of Boardman's book (Ambrose and Marchand 2017). In the UK, energy poverty has "gradually become a widely recognized societal challenge among key academic, practitioner and policy-making circles" (Bouzarovski and Petrova 2015, 31). The past decade or two have also seen

energy poverty research expand to several countries in Europe, as well as Australia and the US (Bouzarovski and Petrova 2015). “The international fuel poverty research community is truly multidisciplinary in nature” with researchers within disciplines such as sociology, geography, engineering, medicine and economics (Ambrose and Marchand 2017, 876). However, positivist and quantitative analysis of secondary data is dominating the field, “whereas more rarely, others have explored the lived experiences and consequences” of energy poverty from qualitative perspectives such as phenomenology and ethnography (Ambrose and Marchand 2017, 876).

2.2 Defining energy poverty

Defining a societal problem is crucial to make it visible, call for action, monitor results and evaluate progress. This is perhaps especially true for energy poverty since, due to its domestic and private nature, it can exist quietly behind closed doors in people’s homes. However, defining energy poverty properly is difficult, as it is a multidimensional phenomenon (Bouzarovski 2018). This implies that specific definitions risk only capturing single facets of the phenomenon. In this thesis, I will lean on Bouzarovski’s broader definition and consider energy poverty as a situation “when a household is unable to secure a level and quality of domestic energy services – space cooling and heating, cooking, appliances, information technology – sufficient for its social and material needs” (2018, 1).

To measure energy poverty in empirical, statistical studies, affordability has been a key issue. Typically, affordability has been understood in objective, techno-economical terms. Boardman initially proposed that households spending more than 10% of their budget on energy costs would be regarded as energy poor. The threshold was set at 10% because it is what the 30% poorest households in the UK were spending on energy at the time of publishing Boardman’s book in 1991. However, the measurement does not require a household to be among the 30% poorest to be categorized as energy poor. Since Boardman’s definition bases its measurement of energy poverty on energy expenditures relative to income, it has been argued that it is “too sensitive to movements in gas and electricity bills” (Bouzarovski 2018, 10). If energy prices rise (or fall) drastically from one year to the next, the number of households considered to be living in energy poverty varies equally. Notably, following rising energy prices, we can expect that the share of income spent on energy expenditures will not only rise considerably in low income households, but also in households

with exceptionally high energy consumption – who may be relatively wealthy. Therefore, the measure has problems identifying the households who are most vulnerable to energy poverty.

A different measure of energy poverty, the "Low Income High Cost" (LIHC) measure, was proposed in 2011 to resolve this issue by specifying that it is not sufficient to have high energy costs relative to income, households must also have low incomes to be considered to live in energy poverty (Moore 2012). Specifically, households living in energy poverty must fall below a defined poverty line after energy costs are paid to be living in energy poverty. However, the LIHC measure caused controversy by leading to a significant reduction in the amount of households considered to be living in energy poverty in the UK compared to the 10% threshold (Bouzarovski 2018). Some have argued that the LIHC measure is "excessively complex and non-transparent" and that it masks the role that escalating energy prices have on the affordability of energy (Moore 2012, 25). Others have pointed out that low income households in energy efficient housing would not be considered energy poor due to low costs, effectively making energy efficiency the key solution to energy poverty (Middlemiss 2017). The same author continues to argue that such measurements disregard the lived experiences of households living in energy poverty and neglects the impact of other factors such as bad health. Both Boardman's approach and the LIHC base their measures of energy poverty on representing households' financial weight of energy costs, the so-called "energy burden" (Herrero 2017). As these examples show, the significant challenge of representing energy poverty quantitatively with objective, techno-economic measurements lies in properly balancing different factors to avoid conflating or masking the number of households living in energy poverty.

To move beyond the technical hurdles linked with objective definitions of energy poverty, some researchers have sought to instead use subjective indicators or self-assessment of "the level of energy service reached in the home" (Bouzarovski 2018, 14). An example is whether households *feel* that energy is affordable (Waddams Price, Brazier, and Wang 2012). According to their statistical analysis of survey data from several thousand households in the UK, 28% of households spent more than 10% of their income on energy, while a lower share of 16% felt that they could not afford sufficient energy use for heating and practices such as cooking. Additionally, the latter group did not necessarily spend more than 10% of their income on energy. The considerable discrepancy between those who spend more than 10% and those who feel that they cannot afford sufficient energy use can partially be explained by

objective measures not capturing household characteristics such as their size and specific energy needs in the cases of, for example, elders and those spending more time in the home (See section 2.4.). However, there are reliability problems related to subjective indicators as well, since different households may have different expectations of what adequate energy use is or how normal it is to freeze according to socio-economic and cultural factors (Herrero 2017). However, proponents argue that subjective indicators are "closer to the lived experience and actual outcomes of the various interlinked factors driving energy poverty" such as household needs and income, fuel carriers and technology as well as policies and regulations (Herrero 2017, 1025).

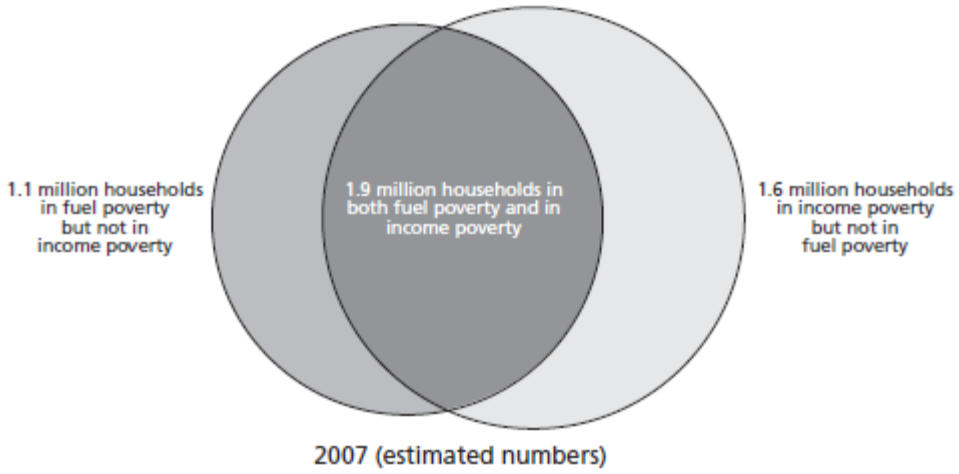
The idea that unites subjective and objective approaches is that households "do not demand energy per se but energy services" (Haas et al. 2008, 4013). It is energy services such as cooking, heating, lighting, and washing that contribute to the "the utility and satisfaction received by the final user" (Bouzarovski 2018, 15). As Boardman writes, "[t]hese are not discretionary purchases, but absolute necessities" (Boardman 2010, 48). As such, living in energy poverty involves experiencing problems using "energy services to live a decent and healthy life" (Middlemiss and Gillard 2015, 147) and maintaining "a comfortable and well-functioning home" (Bouzarovski 2018, 15-16). In the present qualitative study, I will use semi-structured interviews to explore how households who subjectively feel that they have problems in these respects respond to high energy costs and cold homes, for example, by changing and adapting their lifestyles to use energy services and achieve comfort at an affordable cost (See Chapter 4 for further methodological considerations).

2.3 What causes energy poverty?

Energy poverty in the Global North has historically been seen as caused by three factors: low income, energy-inefficient housing and high energy prices (Bouzarovski 2018). This triad of causes was first put forward in in Boardman's book from 1991 and has since come to dominate research as well as being acknowledged by the EU (Boardman 2010; Pye et al. 2015). In short, the lower the incomes, the greater is the size of energy expenses relative to income. As such, households in relative income poverty have less disposable funds to pay for energy services (Bouzarovski 2018). Also, households living in energy inefficient housing will consume more energy to maintain an adequate temperature and high energy prices makes the use of energy services more expensive. These factors impact the affordability of energy

services, potentially leading households to achieve worse quality in energy services (Middlemiss and Gillard 2015, 147). An important takeaway from these causes is that households may be in energy poverty for different reasons. Therefore, energy poverty is not simply equal to income poverty (Dubois 2012). While a household can be lifted out of income poverty by receiving better incomes, better incomes do not necessarily lift households out of energy poverty. Figure 3 illustrates the partial overlap between income and energy poverty in the UK in 2007. According to it, most households struggling with either energy or income poverty only struggled with one of them – despite a significant overlap. Furthermore, the numerous causes of energy poverty mean that lowering energy prices will not lift a household out of energy poverty if the household's home is so energy inefficient that it is impossible to heat adequately. Therefore, improvements made regarding one of the three causes may be diminished by deterioration regarding another.

Figure 3: An illustration of the partial overlap between income poverty and energy poverty in the UK in 2007



From: Boardman 2010, 32

Approaches to energy poverty based on the triad of causes outlined above have been critiqued for being a "technicalisation of fuel poverty [that] excludes other ways of 'knowing'" energy poverty as well as only proposing technical interventions and strategies (Longhurst and Hargreaves 2019, 1). According to these critiques, energy poverty is reduced to a primarily technical problem that demands for technical solutions related to the triad of energy poverty. Examples of such interventions are improving the housing stock, the income of energy poor as well as the functioning of the energy market to provide cheaper energy. However, the

outcomes of such interventions are not linear and must be understood within a context of household needs, practices and priorities (Bouzarovski and Petrova 2015, 36). For example, energy efficiency improvements have been found to have several outcomes such as reduction in fuel use or a warmer home (Gibbons and Singler 2008). Others have observed that such interventions are only likely to improve the wellbeing of households when they lead to improved comfort and less worry about energy bills (Liddell 2012). Therefore, energy efficiency interventions must address the needs of the households, not just those of the housing stock.

Contextual factors are important to understanding energy poverty. Bouzarovski and Petrova writes that "domestic energy deprivation may arise as a result of a mismatch between the heating or cooling system installed in the dwelling, on the one hand, and the energy service needed by the occupant household, on the other" (2015). If the heating system cannot be used to achieve comfort, a household may be stuck in energy poverty. An example of this is provided by a study in Australia that found that centrally heated homes with only one thermostat lead to difficulties maintaining an evenly warm temperature (Willand, Maller, and Ridley 2017). In such cases, a household might be unable to *use* energy adequately although being able to afford to *pay* for energy.

Furthermore, the technical-centered approaches have been critiqued of conceiving of energy poverty "in a way that aligns with policy categories, rather than [conceptualizing] the experience from the perspectives of those affected" (Connon 2018, 46). Notably, there is only some "recognition that energy needs vary from household to household, or that being in fuel poverty has larger potential impacts on some people than others" (Day, Walker, and Simcock 2016, 257). Alternative approaches have sought to move beyond issues of affordability to explore the "factors that determine the quality and type of energy services received in the home" (Bouzarovski 2018, 11). Therefore, for the sake of the present study, I do not seek to "objectively" study how the triad of energy poverty impact households. Instead, I will explore the "how", by studying the capacity of households to achieve comfort and satisfy personal needs by using energy services in their daily life as perceived by themselves. The relevancy of the triad for the present study is, therefore limited to this research framing. By exploring household experiences, we can get an understanding of "what it is like" to live in energy poverty.

2.4 Who experiences energy poverty: Vulnerable groups

Different households are likely to have different vulnerabilities. These vulnerabilities depend on who the households consists of as well as where the household lives (Nance 2013). The literature on energy poverty in Europe is evidence that those living in energy poverty tend to be concentrated in specific demographic groups (Bouzarovski 2018). According to techno-economic definitions of energy poverty, everyone with a low income is potentially vulnerable to living in energy poverty. In a study of energy poverty in Austrian households, groups identified as more likely to have low incomes were unemployed, pensioners, the working poor, immigrants and single parents (Brunner, Spitzer, and Christanell 2012; Nance 2013). The latter group has also been found to be vulnerable to rising electricity prices in Norway (Anker-Nilssen 2006). Additionally, any single person household is vulnerable since it depends solely on its own resources to service energy costs (Boardman 2010). Generally, low-income households in the UK often live in worse quality housing – in part due to having insufficient means to improve the energy efficiency themselves (Boardman 2010). Low-income households who under-occupy large houses are especially likely to live in energy poverty in the UK.

However, techno-economic factors such as income and energy efficiency "are only a part of the factors that describe the likelihood of experiencing a socially and materially inadequate level of energy services in the home" (Bouzarovski 2018, 19). According to the broader definition of energy poverty applied in this thesis, the perceived energy needs of a household are relevant in identifying vulnerability. These perceived needs might differ according who the household consists of. Generally, households formed by people who spend more time in the home, such as pensioners and unemployed, are more exposed to the effects of inadequate energy use. Furthermore, studies in Australia and several European countries have found the that elderly, the long-term ill and households with children have particular energy needs (Brunner, Spitzer, and Christanell 2012; Gibbons and Singler 2008; Petrova and Simcock 2019; Willand, Maller, and Ridley 2017). Notably, aging, chronic illness and disabilities are linked to sensitivity to cold due to lower blood circulation and reduced mobility. As such, health and physiological concerns are not merely consequences of energy poverty, but also contributory causes (Middlemiss and Gillard 2015).

Tenants are also more likely to experience energy poverty. Particularly they have been found to rent, often privately, energy inefficient dwellings in poor condition in quantitative and qualitative studies in Europe and Australia (Boardman 2010; Brunner, Spitzer, and Christanell 2012; Willand, Maller, and Ridley 2017). Qualitative research has shown that tenants may also experience energy poverty differently than owner-occupiers. In the UK, it has been found that landlords' interest in investing in the energy efficiency of their tenants' homes varies greatly (Gibbons and Singler 2008; Middlemiss and Gillard 2015). Landlords may postpone renovations for years and when these renovations happen, they do not necessarily prevent further experiences of energy poverty. If the tenants invest in renovations themselves, they run the risk of having to move before benefitting (Middlemiss and Gillard 2015). Tenants may also experience insecurity about rent prices rising investments in energy efficiency by landlords, according to a study in Austria (Brunner, Spitzer, and Christanell 2012).

While research on vulnerabilities of energy poverty tends to focus on factors such as age, income and health status, gender remains largely under-researched (Petrova and Simcock 2019). However, some gendered differences have been observed in the literature. A study found that women-led households in the Czech Republic are overrepresented on various measures of energy poverty (Bouzarovski and Tirado Herrero 2017). Additionally, women in energy poor households have been found experience more thermal discomfort than men in Ukraine (Petrova et al. 2013). On an emotional level women may suffer more from having to balance between rationing energy use and caring for children and family members, according to a study in Poland, Greece and the Czech Republic (Petrova and Simcock 2019). However, the latter study also found that men and women experience shame and stigma equally from being unable to participate in common social activities.

While there are numerous factors that increase the probability of living in energy poverty, Boardman writes that "[t]he cumulative effect of these triggering factors is much greater than a sum of their parts" (2010, 41). In other words, "the greatest risk of fuel poverty occurs when several precipitating factors come together in one household" (2010, 40). Therefore, we may generally expect that the informants of the present study are vulnerable to energy poverty for numerous reasons.

2.5 Enduring and coping with energy poverty

Experiences with energy poverty are dynamic (Middlemiss and Gillard 2015). Generally, households in the Global North go about coping in various ways, something which often leads to negative effects on well-being, health and social life (Bouzarovski 2018; Gibbons and Singler 2008). Households enduring cold indoor temperatures often adopt investment free coping strategies for staying warm. Examples from the literature are putting on extra clothes and underwear, wrapping up in blankets, going to bed early, sharing beds with people and animals, having hot drinks and using hot water bottles (Anderson, White, and Finney 2012; Willand, Maller, and Ridley 2017).

Many households endure cold indoor temperatures having to ration energy use to cope with high energy costs (Gibbons and Singler 2008). Examples of such strategies are setting heating to low, heating only occupied rooms, turning off the heat during the night and sitting in front of the radiator to avoid heat loss (In Austria: Brunner, Spitzer, and Christanell 2012; In Australia: Willand, Maller, and Ridley 2017). Beyond heating-related coping strategies, households are known to cut energy costs by using smaller or fewer light sources, turning off the lights when leaving a room, using minimal hot water, using microwaves instead of ovens and relying on batch cooking (Brunner, Spitzer, and Christanell 2012; Longhurst and Hargreaves 2019). In the UK, such coping strategies can be driven by worry of excessive energy use: in some cases, even when households can afford to use more energy, they continue rationing out of fright of large energy bills (Longhurst and Hargreaves 2019). Having to ration energy use extensively has been found to be mentally draining as well as conflicting with social expectations of being a good parent, spouse or child, according to a study in Poland, Greece and the Czech Republic (Petrova and Simcock 2019). When rationing energy use is not sufficient, households have been found to incur debt to afford paying energy bills. Young adults have been found to exhibit less fear about incurring debt, according to a review of research on the coping strategies of energy poor households in the UK (Gibbons and Singler 2008).

However, households do not merely engage in energy related coping strategies, but cut spending on “pleasures”, food, and social activities. Especially single parents in the UK have been found to cut food costs by reducing the quantity and quality of food bought to cope with high energy bills, a strategy that may lead to long term physical health impacts due to poor diet and nutrition (Gibbons and Singler 2008). Such strategies have also been linked to loss of self-esteem.

Improving the energy efficiency of the dwelling can lead to lower energy costs and consumption as well as warmer homes. Such investments may lead to lower energy costs or more comfortable indoor temperatures, reducing the need for adopting coping strategies such as the above examples. The outcome typically depends on the measures and size of the investments made, according to a review of coping strategies in the UK (Gibbons and Singler 2008). Households have been found to make small scale investments such as installing sealing strips or textile draft stoppers (Willand, Maller, and Ridley 2017). Larger investments in energy efficiency are less frequent in the literature, something which can possibly be explained by the fact that, as already pointed out, households living in energy poverty tend to have low incomes and be tenants.

Households have been found to prioritize and cope differently, according to factors such as age, attitudes, experiences and household composition (Gibbons and Singler 2008). Pensioners, for example been found to be more likely to underheat their homes, while lone parents more often limit food expenses, as observed in the UK (Gibbons and Singler 2008). Furthermore, it has been observed that the extent to which households will engage in coping strategies depends on their subjective experiences of being cold or not affording to pay the bills (Middlemiss and Gillard 2015). As such, a household's perception of its own discomfort is important to understand why they engage in certain coping strategies. In a statistical analysis of how nearly 700 low income households in the UK cope with high energy costs and cold homes, a hierarchy of coping strategies was found (Anderson, White, and Finney 2012). The first coping strategy households would adopt to get by was cutting costs on non-essentials, before moving on to food costs, followed by heating and other essentials. In tougher times, households use their savings and borrow money from their social network, while in extreme cases they would incur debt, delay the payment of pre-existing debt, and work additional hours.

The coping strategies which households in energy poverty engage in lead to a lowering of their living standard in many cases, according to a study in Austria (Brunner, Spitzer, and Christanell 2012). Not only do households give up give up pleasures and struggle to satisfy basic needs, but the stress and anxiety endured while coping contribute to further negative health effects such as depression (Gibbons and Singler 2008). This is linked to social relationships and caretaking practices. Households in the UK have been found to turn the heat up higher than what they can afford when having guests over out of stress and fright or to

express love and generosity to their guests (Longhurst and Hargreaves 2019). This is often linked to having (grand)children and elders over. When households do not live up to expectations or are unable to care for friends and family, they may experience embarrassment, shamefulness, and stigma.

Research on the health effects of energy poverty have predominantly focused on physical health effects (Day, Walker, and Simcock 2016). Enduring cold temperatures in the home has been linked to negative health effects. Households who underheat for long periods of time have greater risk of cardiovascular and respiratory problems (Gibbons and Singler 2008). Children growing up in homes with condensation due to poor insulation are susceptible to developing asthma (Boardman 2010). The elderly are particularly vulnerable to negative health effects from colder temperatures due to aging, reduced mobility, blood thinning medication and thinner skin, according to an Australian study (Willand, Maller, and Ridley 2017). Energy poverty can lead to excess winter mortality (people who would not have died if summer temperatures lasted all year long). In the UK, the excess winter death toll equaled to 26 000 – 55 000 people annually between 1999-2008 (Boardman 2010). While excess winter mortality affects all ages, elders have been found to be particularly present in the statistics in the UK.

2.6 Summary

In this chapter, we have seen that energy poverty is a multifaceted phenomenon that may be defined and understood in various ways. For the purposes of the thesis, I have defined energy poverty as a situation "when a household is unable to secure a level and quality of domestic energy services – space cooling and heating, cooking, appliances, information technology – sufficient for its social and material needs" (2018, 1). By using this definition, I frame energy poverty from the perspective of the household, in other words from the end-user of energy. It is both what they do and why they do it that matters. This perspective is crucial to not only understand "what it is like" to live in energy poverty, but also to explore energy poverty as a phenomenon that occurs within contexts beyond techno-economic causes such as low income, high energy costs and poor energy efficiency. Rather, I aspire to explore energy poverty from within the context of living in energy poverty. By doings so, I acknowledge that different households may experience and cope with aspects of energy poverty in different ways according to what makes sense to them. As we have seen, households living in energy poverty

in the Global North may adapt differently according to factors such as their past experiences, their perceived needs, and their composition.

3 A framework for analysis: Practice theory

In this chapter I will present the theoretical framework that will be used to analyze the data from interviews with households experiencing and coping with energy poverty (See Chapter 8 for the analysis). I acknowledge that households may have different energy needs and that they do not demand energy per se, but energy services (as seen in Chapter 2). Therefore, it is important to use a theoretical framework useful for analyzing how households use energy services to satisfy their own needs. Researchers have used practice theory to conceptualize energy consumption so that patterns of energy demand can be seen as "a matter of understanding of how social practices develop, change and intersect" (Shove and Walker 2014, 7). By conceptualizing energy use according as household practices, researchers have explored, for example, how households use technology to achieve ends such as comfort and how these are patterned according to social factors such as culture and gender. In the present thesis, I will draw on tools from practice theory to understand the implications that energy poverty has on the experiences, practices and well-being of households. In doing so, I will apply concepts from the French sociologist and practice theorist Pierre Bourdieu to understand why and how households may not have access or agency to perform certain practices.

The chapter opens with a short history of the philosophical debate on agency and structure, from Descartes until the end of the 1900s. Having this historical context as a backdrop, I will argue that the French sociologist Pierre Bourdieu's concept of *habitus* goes a long way in transcending a dichotomy between structure and agency in that such structures are already embodied by agents and expressed in the performances of practices. I argue that habitus give agents a conditioned (or structured) agency, something which varies according to agents' position in hierarchies of power relations. Throughout the chapter, I will explain some key concepts of practice theory, the constituent elements of practices, how practices change and how they structure behavior. In sum, the concepts will provide a basis for understanding practices and habits in households living in energy poverty as well as how such households are situated in social hierarchies of power relations.

3.1 Transcending an age-old dichotomy

Descartes is often referred to as the founder of modern philosophy with his famous separation of the body and the mind in the 1600s (Hatfield 2018; Robinson 2017). He theorized a subjectivism in which the rational mind or subject is autonomous from the laws of the universe and objects. This entails that humans have freedom to interfere with the mechanics of the body and decide on how to behave. Dichotomies such as mind-body and subject-object have since been debated by philosophers and social researchers. An important facet to this debate concerns the meaning of agency, generally defined as "the capacity, condition, or state of acting or of exerting power" (Merriam-Webster 2020). Are humans free and reflexive individuals that behave as they will and desire or do they rather act like a reactive atom that is determined to behave according to laws that are external to its will? In other words, are humans the agents of their own behavior or is behavior caused (or structured) by the environment? Many theories of human behavior have sided with the subjectivism of Descartes. For example, in the 1800s, the utilitarists Bentham and Mill argued that behavior was motivated by the beliefs and values of free human beings – ideas that figure prominently in contemporary rational choice theory's conceptualization of lifestyles and tastes as expressions of personal choice, preference and motivation (O'Connor and Franklin 2020; Shove, Pantzar, and Watson 2012).

Social scientists in the objectivist tradition have sought to challenge Descartes subjectivist emphasis of human agency arguing that agency, and thus human behavior, is determined by external events (Bernstein 2011a). Across disciplines, these external events or "structures" differ in content, from social, biological to economic factors, but have in common that they are causes outside of human free will. For example, sociologist Talcott Parson's structural functionalism sees the social structure surrounding humans as dominating their agency and argues that "individual action is little more than a manifestation of social functions" of the structure surrounding the individual (Epstein 2018). The individual then becomes somewhat a product of social factors. In the field of psychology, variations of behaviorism have either reduced psychological motivations and desires to physiological or biological factors or completely rejected psychological phenomena in arguing that human behavior is simply a matter of causal stimulus and response of the body (Graham 2019; van Riel and Van Gulick 2019). According to these theories, nothing is mental and everything is physical and, thus, predictable. They see concepts like free will, emotions and motivations as non-existent.

What do we make of these contradictory positions? Do humans have agency or are they determined by structures? Before answering these questions, it is worth evaluating the underlying premises. The question of agency vs. structure is dichotomous and therefore begs for a categoric answer. As such, these questions frame thinking in the language of either/or: either humans are conscious, free and rational subjects or humans are subordinated by external structures or physiological laws. The one excludes the other, so to speak. For the present study, this amounts to a question of whether people heat the dwelling to for example 23 degrees Celsius out of conscious deliberation or because they are determined to do so by for example socio-cultural structures. With such a perspective, we risk overlooking the complex relations between agency-structure (or mind-body) beyond this dichotomy, how we might be conditioned to use energy in certain ways and at the same time might act deliberately to change conditioned behaviors. The dichotomy of agency and structure can perhaps only be sustained in *theory*. We should, therefore, ask how agency and structure work in *practice*.

During the past century, several philosophers and social scientists have aspired to transcend "the metaphysical heritage of a Cartesian philosophy" that is these dichotomous questions (Weik 2006). Thinkers such as the German hermeneutic Martin Heidegger (2007, originally published in 1927), the French phenomenologist and psychologist Maurice Merleau-Ponty (2014, originally published in 1945) the Austrian-British language philosopher Ludwig Wittgenstein (2010, originally published in 1953), and the French sociologist Pierre Bourdieu (2002a, originally published in 1979) have contributed to a reorientation towards the practices as an object of scientific inquiry. This has led to "a diffuse movement" of practice theories with notable contemporary contributors such as the philosopher Theodore Schatzki, the cultural sociologist Andreas Reckwitz and the sociologist Elizabeth Shove (Shove, Pantzar, and Watson 2012, 6). Rather than presenting one grand social theory, practice theory consists of a cluster of interdisciplinary theories that in various ways seek to "transcend the dualisms of structure and agency, determination and voluntarism" (Shove, Pantzar, and Watson 2012, 3). This marks the 'practice turn' in social theory (Shove, Pantzar, and Watson 2012).

3.2 Habitus – understanding routinized behavior

Practice theory does not conceptualize behavior as a question of either conscious deliberation or social determinism. When we turn on the lights in the morning, take a shower instead of a

bath and eat breakfast in the morning, we are not making fully conscious decisions. Rather, we do this in largely habitual and unconscious ways. We might be able to consciously reason and reflect on why we had toast in the morning, but if we were to deliberately make all the choices we do in a given day, we would probably spend more time reflecting than doing what we need to do. At the same time, we are not determined to follow our morning routines and may change many of them in an instant. However, most of the things we do are based on tacit assumptions. We assume that one must eat breakfast to stay energized until lunch and that one must take a daily shower to stay clean. If we do not perform common routines, people may react. We often follow "rules" in doing what is "normal". As such, the "capability to 'go on' through the flow of largely routinized social life depends on forms of practical knowledge, guided by structural features – rules and resources – of the social systems which shape daily conduct." (Shove, Pantzar, and Watson 2012, 3). In other words, we do what we do because we have a practical and habitual sense of what we should do. These sensibilities of what to do might be personal habits or socially conditioned. According to practice theory, the habitual dimension of behavior is important as it predicts that the norms and rules of social structures tend to be relatively stable. Most people typically do not go from maintaining a temperature of 23 degrees Celsius one day to 40 degrees the day after and then 10 degrees on the third day. But that does not mean that norms and habits of heating do not change. To understand this, we must look at habitus.

Habitus is an important concept in practice theory that explains the relative stability of behaviors. It can be defined as "an ensemble of schemata of perception, thinking, feeling, evaluating, speaking, and acting that pre-formats all the expressive, verbal, and practical manifestations and utterances of an actor" (Chudzikowski and Mayrhofer 2011). This definition and similar ones used in contemporary sociological research are usually based on the writings of Bourdieu, who described habitus as a person's social "history turned into nature" (1977, 78). We are dispositioned, but not determined, by our habitus to perceive, feel and act in certain ways depending on our social background and upbringing. Who we are and what we do are molded by our environment over time so that habitus is a "way of explaining the regularities of behaviour that are associated with social structures, such as class, gender, and ethnicity, without making social structures deterministic of behaviour, or losing sight of the individual's own agency." (Power 1999, 48). We embody norms related to social structures such as those in the previous quote so that they are a part of who we are, how we perceive the world and what we do in the world. To provide an example, a study using

practice theory to understand electricity cultures found that whether households in Norway and France differ as to whether they link global warming to their own electricity use depending on the different cultures' experiences with renewable energy and issues related to global warming (Winther and Bouly de Lesdain 2013). For example, the study found that Norwegian households tend to perceive electricity consumption as sustainable due to high levels of hydropower production even though the country imports fossil-based energy. Such cultural perceptions were, in turn, were found to disposition whether households engage in certain saving practices or not. As such, social structures have causal powers in dispositioning our subjectivity and what we think is sensible to do (Bourdieu 2002a). Via habitus, we embody practical logics that makes it "reasonable" to perform certain practices without presupposing any underlying reason that we are conscious of (Bourdieu 1977). It just makes sense.

From the dispositioned character of behavior, we understand that what we do and want to do is not simply deliberate. However, it is worth pointing out that while our social background dispositions us giving what we do a strong habitual and unconscious component, it does not determine it. The dispositions of habitus can be described as rules of thumb for improvising in different situations. After all, no situation is identically the same, thus, we cannot act like robots programmed to apply the same rule consistently. Rather, the habitus dispositions us to generally act and react in certain ways in various situations, not always do one thing. As such, habitus is "the strategy-generating principle enabling agents to cope with unforeseen and ever-changing situations" (Bourdieu 1977). By acting and improvising, we do not only reproduce dispositions, but adapt and change them. Therefore, we are at the same time dispositioned by our background and capable of initiating change. However, this means that the goals we may set, consciously or unconsciously, are already dispositioned by our social background. Therefore, the habitus goes a long way in transcending the agency-structure dichotomy in conceptualizing agents as both dispositioned and free at the same time. We are not mechanical robots or completely deliberate and spontaneous beings, but we have a conditioned freedom to act in ways that are "as remote from a creation of unpredictable novelty as it is from a simple mechanical reproduction of the initial conditionings" (1977, 95). This dynamic relationship between agency and structure is relevant for understanding differences between households living in energy. As has been observed in a study of energy poverty in Austria, households who have descended on the social ladder tend to strive towards living a financially cost-intensive lifestyle compared to households of more modest

background (Brunner, Spitzer, and Christanell 2012). By drawing on the concept of habitus, I will be able to describe the practices of households living in energy poverty in the context of social structures and agency.

Having explained why practices are performed largely in habitual ways, I will now discuss what practices are and give examples from research on energy practices.

3.3 What are practices?

Practice theory transcends dichotomous approaches to behavior by reorienting the focus from a free individual or a deterministic structure, towards *practices* as the object of scientific inquiry. Practices are commonly defined as "a routinized type of behavior which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, "things" and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz 2002, 249). Examples of practices are commuting, hosting a dinner party, and watching TV. Some of these practices directly consume energy (commuting and watching TV), while others may depend more indirectly on energy use (a dinner party often involve cooking, heating and lighting services) We do not participate in these practices by "doing it however we want", but with assumptions and conceptions of rules to follow as well as what are appropriate ways of performing the practices (Dwyer 2009). For example, when hosting a dinner party people typically expect eating certain types food, expectations that may have implications on energy use. We can imagine a host serving guests toasted bread because she did not bother cooking out of laziness, to save energy or out of ignorance. This would typically not be considered "dinner food", something which involves several techniques (boiling and cooking) and energy technology (stoves and ovens). These aspects of dinners practices are not merely widely shared norms, but it is a part of what the practice of hosting a dinner *is*. We can imagine guests being disappointed with eating toast, effectively indicating that the host has not followed the "rules" of hosting a dinner party. Therefore, if we perform practices "however we like" without following certain "rules", we risk failing to perform a practice adequately.

Research applying practice theory have explored the various ways in which practices are shaped by "rules" and the context in which they are performed. For example, information is not interpreted neutrally but as situated in contexts pertaining to for example socio-economic

factors and personal experiences. A study exploring the effect of in-home displays in Norwegian households found that feedback on energy consumption provided by the display did not alone motivate households to reduce energy consumption (Westskog, Winther, and Sæle 2015). Rather, contextual factors such as affluence and previous experience with similar feedback technology impacted whether households engaged in reducing energy use after installing an in-home display. Notably, the display could provide less affluent households with more financial control and empowerment by making energy consumption more visible.

In the last section I gave an example of how cultural perceptions affects practices in a study of energy saving practices Norway and France. In addition to cultural perceptions, the practices we engage in and the technology we use may be subject to "gendered logics". An ethnographic study of Swedish households (Winther 2012) observed that while couples of men and women make refer to themselves as a "team", they may have gendered division of household responsibilities. Generally, men were responsible for energy, technology, the garage, and the exterior of the house, while women took care of the interior. A man proposing a new heating system in the garage will typically not receive many objections from his wife. However, if the system will be located in the living room, it will lead to "in-between" situations where the oven (the man's responsibility) and the interior (the woman's responsibility) have to be negotiated to reach an agreement. Therefore, domestic practices and energy use may be shaped by gendered dynamics such as these.

Wilhite and Nørgård (2004) write about the assumption that energy efficient technology necessarily leads to a reduction in energy use. What happens when consumers invest in energy efficient technology is not simply an expected reduction in energy use but also an increase in the use of the technology. As such, the impact energy efficiency has on energy practices reduces the expected effect of energy efficiency. The authors estimate that such rebound effects consume 20% of the expected in energy use. Therefore, they argue that energy efficiency must be regarded as a goal in itself but as a means for reducing energy use.

In sum, these studies show how practices are bound together with a context of socio-economic, practical and gendered "rules". We typically follow the guiding rules of practices without being conscious of them – it simply makes sense to is. Following them, deliberately or not, is a part of what the practice entails. As such, practices have agency and shape our behavior. In the dichotomous language of agency-structure, one could say that practices mediate *between* the agent and the world, but it would be more precise to say that it is through

practices that agents are *in* the world and that the world is for agents. We understand the world and behavior through the lens of what are adequate ways of performing practices. Therefore, by exploring what practices are we can get a new understanding of ourselves and the world and how the two are bound together. Having discussed what practices are it is time to explore what they consist of.

3.4 What do practices consist of?

Practice theory conceptualizes agency as distributed among various elements. It is not only the agent who has agency, but also the social, cultural and material structures embodied in a practice (Hansen 2012; Wilhite 2016). The rule following involved in practices, as described in the previous section, can be understood as combining certain elements. According to Shove, Pantzar and Watson practices consist of three such elements: materials, competences and meanings (2012, 30). According to this approach, practices change when new connections between elements are created and broken.

As Schatzki says: "[p]ractices are intrinsically connected to and interwoven with objects" (2002, 106). For example, practices often include using resources, capital, tools, equipment, infrastructure, ingredients or simply one's own body. Material elements are typically physical objects that are in one single space and can be transported (Shove, Pantzar, and Watson 2012, 52). Heating practices, for example, often involve using a fire stove or electric radiator that consume fuel carriers such as firewood and electricity. In the case of electricity, an infrastructure must be in place as well to provide an electricity supply. Additionally, these practices are situated in a material context such as house or outdoor which has implications for fuel necessary to obtain thermal comfort. Sometimes new elements are available to be used in practices, such as wood pellets. However, practices do not depend on using specific materials. While fire stoves typically involve using firewood, practitioners may improvise and burn whatever inflammable material they have at hand. Additionally, materials set a limit for how to perform certain practices. For example, whether the settings on the thermostats are simply on/off or specific temperature levels, will have implications on how precisely one may adjust the temperature.

Practices might necessitate certain levels of knowledge and competences. This might be linked to how to use certain tools or materials. Households motivated to reduce energy use

may perform different saving practices depending on how much knowledge they have about energy use. Unlike material elements, competences are not as bound to space and time. How popular certain competences are may vary depending on how easy and necessary it is to acquire them. They can disappear when left unused or when new technologies replace old ones. For example, most people will probably not bother learning to light a campfire with flint and tinder for as long as matches and lighters exist. However, old competences may continue to exist in conscious memory, instruction books or videos or "in the hands", making possible a resurgence in use and popularity (Shove, Pantzar, and Watson 2012, 52).

Generally, the practices we perform is endowed with meaning. Shove, Pantzar and Watson use meaning "to represent the social and symbolic significance of participation at any moment" (2012, 23). According to their theory, meaning is an umbrella term for all psychological phenomena like emotions and motivation as well as social phenomena like identity and status. Thus, meaning in general exists "out in the world" – not merely in the minds of agents – shared collectively as a part of practices, ready to be linked with other elements. As such, abstract phenomena such as feelings and atmospheres are not merely psychological according to practice theory, they are intrinsically bound with certain practices. For example, having a cozy atmosphere in the home cannot be separated from the lighting and heating practices involved in creating the atmosphere. It is by lighting and heating the home in certain ways that the atmosphere is created. Furthermore, the meaning element of a practice cannot be preserved in like competences in memory or an extra electric radiator in the basement. Rather, the meaning of practices tends to change over time. For example, Shove notes that new electric heating technology has changed how much we are exposed to colder temperatures as well as our expectations of thermal comfort in the home during the past decades (2003a).

The idea of connecting elements is crucial for the existence of practices. It is during the performance of a practice that various elements are connected (Shove, Pantzar, and Watson 2012, 41). A given practice exists when specific connections between elements are stabilized and normalized to the degree that they function as rules or guidelines on what performing the practice involves. However, the authors stress that this is not an endpoint, but performing practices is an active and ongoing process of connecting elements that may change over time (Shove, Pantzar, and Watson 2012, 24). A given practice can disappear if one of the three element disappears. A household might run out of firewood or the electric radiator might

break, suspending heating practices until they reacquire the necessary elements. Similarly, material elements can compensate for or make competences disappear. For example, new electric cooking utensils such as microwaves and products such as frozen pizza have made cooking easier, possibly at the expense of cooking skills.

Having discussed how performing practices involves combining various elements, it is time to discuss how households may have uneven access to such elements might.

3.5 Fields of power: having access to practices

Following the element-based approach to analyzing practices described above, the popularity of a given practice is limited by the availability and distribution of the elements it involves (Shove, Pantzar, and Watson 2012, 27). To be able to perform a practice, one must have the necessary competence, find the practice meaningful or motivating and notably have access to the relevant materials. Thus, a practice will simply not become widespread if the necessary elements are not available to a larger audience. Such a limitation in popularity can happen if only one element has limited availability. Furthermore, the question of who can perform a given practice is a question of who are able to connect the relevant elements. In practice, households do not all have the same access to the same materials, enjoy the same level of competence nor find the same things equally meaningful. As we saw in Chapter 2, not being able to afford adequate energy use is an important facet of energy poverty. The fact that households have unequal opportunities to perform, not only energy practices, but practices in general is an important point, because "[t]hose who have the means to engage in valued social practices are in an especially privileged position in that it is they who contribute to the direction in which such practices develop" (Shove, Pantzar, and Watson 2012, 135). For example, it is these "privileged" households who may impact norms and expectations of energy use. This provides ground for hierarchies in societies: "[b]y participating in some practices but not others, individuals locate themselves within society and in so doing simultaneously reproduce specific schemes and structures of meaning and order" (Shove, Pantzar, and Watson 2012, 54). Social exclusion, then, amounts to being unable to perform practices relevant for being a part of society, such as adequate energy services. However, Shove, Pantzar and Watson do not address at length how social exclusion function or how the elements that make up practices are unequally distributed in a population. For such an understanding, they refer to the works of Bourdieu (Shove, Pantzar, and Watson 2012, 135).

The *field* is Bourdieu's concept for a social space. The entire "social universe" is composed of countless fields where social interactions and practices take place (Grenfell 2008). These interactions are characterized by struggles for positions and power within the field (Shusterman 1999). Examples of fields are education, politics, job market, bureaucracy, and family. Additionally, there are boundaries to a field that distinguishes it from other fields and, thus, limitations to what can be done within a given field (Grenfell 2008). In a field, we occupy different roles or positions, follow rules that are perhaps taken for granted or articulated. For example, as a student at a university in the field of education one must choose a discipline (unless one chooses an interdisciplinary program) in a hierarchy of disciplines seen as more or less important, prestigious, demanding or meaningful by others. As a student of sociology, for example, one inhabits an inferior position in a hierarchy relative to, for example, students of medicine or engineering. This position is additionally inferior if one goes to community college relative to law students in college. Employers might also consider applicants' degrees useless without making any rational assessment. In that case the degree has an inferior position in the field of a given occupation.

The agents situated in a field are brought together by shared understandings, perspectives and values embodied in their habitus. Naturally, no one has lived in the exact same social environment having the exact same experiences thus no one has the exact same habitus. However, while the content of one's experiences might be different, people in the same field might have experiences structured similarly according to positions such as class, gender, culture and sexuality (Grenfell 2008). A field can thus be understood as a community of interpretation. Additionally, people in a field having a somewhat different habitus explains how social dynamics of domination is present in a field: Some people have a habitus more advantageous in a field, making it easier for them to perform practices well and dominate people with a habitus that is less suited to the practices relevant to the field. In other words, people in a field can variously influence the groups' shared understandings and the practices they partake in. Thus, one is always positioned in some type of hierarchy in a field and that a field promotes and values certain types of habitus. The domination that characterizes fields can otherwise be described as a competition for accumulating *capitals* which fields are structured around (Grenfell 2008; Power 1999).

3.6 Forms of capital

The position one has in each field is equal to the amount of capital one possesses. A person has an objective position (dominating or dominated) in a field that can be described according to the characteristics of his total capital. This position affects how he sees himself and people in other positions. Bourdieu does not treat the relation between dominance and capital simply as an economic question of who has the most money or wealth. He argues that it is "impossible to account for the structure and functioning of the social world unless one reintroduces capital in all its forms and not solely in the one form recognized by economic theory*"* (Bourdieu 2002b, 280). Bourdieu presents three main types of capital: economic, social, and cultural capital (2002b). *Economic capital* is the most orthodox type of capital, associated with money and wealth, but also material resources like the ones mentioned in the above framework of analyzing practices. *Cultural capital* exists in the form of knowledge, skills, tastes and qualifications and credentials related to judging, performing or creating culture. Examples are having an education, knowing how to cook, speak a language, playing the guitar, judging a painting. Cultural capital can be accumulated by investing time in studying or more indirectly by being raised in a cultivated home. *Social capital* represents one's social network, social obligations and membership in groups giving access to goods and opportunities. Social capital may be institutionalized as a title of nobility or social arrangement of the family. The larger the social network one can mobilize and the larger the volume of the network's forms of capital, the more social capital one possesses.

In addition to the three main forms of capital Bourdieu refers to as *symbolic capital* as an additional value that the three forms of capital can have. For example, possessing a certain material resource, having certain a skill or a certain friend can give prestige, renown, authority, and legitimacy. As an example, Bourdieu points out that an image of respectability can be converted into political positions (1984).

The three main forms of capital are bound together. Although a university diploma or a friendship simply cannot be transferred to a person in an economic transaction, cultural and social capital can under certain circumstances be converted into economic capital. Additionally, there are some goods and privileges which one cannot access with economic capital without also having a certain type of social or cultural capital (Bourdieu 2002b). One cannot simply purchase a good and supportive friend for though times or a university diploma to qualify for a job. These capitals are not passive possessions, but when we act in a field, we use our network, qualifications, and finances to produce changes and consequences in the

fields they are used. The power these capitals provide us with depends on how useful they are in any given field. For example, we should expect a lawyer to maneuver the laws and regulations important to the field of bureaucracy better than an art historian. We should also expect someone who knows one lawyer personally to benefit in the same way, more so than someone who knows sociologists – irrespective of how many sociologists they know. In other words, being able to dominate or exert power in a field is not simply a question of having the most total capital measured in absolute terms, but having the relevant capital (Bourdieu 2002a, 16). There is no one capital to dominate all fields, meaning that an agent can be dominating in one field and dominated in another depending on the capital he has and the preferred capital of each field.

Unequal distribution of capital will be an important part of the present study. Notably, I will focus on the importance of economic capital understood as income and social capital. Furthermore, concepts such as habitus and field will be useful in understanding why households experience and cope with energy poverty in various ways.

4 Methodology and ethical considerations

When studying a marginal phenomenon like energy poverty, it is likely that sensitive issues will surface regarding the private lives of vulnerable households. This is, perhaps, especially the case for the present study, exploring household experiences with energy poverty, how they cope and implications for their wellbeing. Therefore, it is important to approach informants in a suitable manner. In this chapter, I will explain at length the ethical and methodological considerations that went into the process of recruiting and interviewing informants as well as analyzing the data.

4.1 Conducting research using practice theory

The aim of this study is to explore and analyze how households experience and make changes in their daily life in response to experiences with energy poverty. This aim is intentionally broad. Notably, the aim is not limited to exploring energy related practices and coping strategies specifically, but also how energy poverty has implications for the households' wider lifestyle of practices. In doing so, I am not merely aiming to register what they do or not, but how they draw on "shared understandings, norms, meanings, practical consciousness and purposes" in their daily lives to perform practices, coping strategies and manage energy poverty (Shove, Pantzar, and Watson 2012, 9). To understand how households do this, it is necessary to use a methodology that harmonizes with practice theory. Generally, qualitative methodologies suit the aim as they prioritize "depth over quantity and works at delving into social complexities in order to truly explore and understand interactions, processes, lived experiences and belief systems" (O'Leary 2017, 142). Therefore, qualitative methodologies are useful for exploring the experiences, social relationships, emotions and behaviors (Butler and Sherriff 2017). Furthermore, many qualitative methodologies are theoretically flexible and can thus be grounded in what Halkier and Jensen (2011) take to be the constructivist epistemology of practice theory, to study "what it is like" to be energy poor (Willig 2013, 8). According to constructivism, doing research is not producing knowledge about the world "in itself", but about how people construct, perceive, experience and give meaning to the world from the perspective of their social, cultural and historical situation (Willig 2013). More specifically, practice theory necessitates a method that lets me explore how energy poor households use "the material environment … and the implicit and explicit practical

knowledge stored in [it], as central in the process of creating interaction, continuity and reality" (Halkier, Katz-Gerro, and Martens 2011, 6). How households living in energy poverty perceive and construct their reality cannot necessarily be observed by a researcher, but can be accessed via in-depth, semi-structured interviews (Seale 2018).

In the spirit of qualitative methodologies, semi-structured interviews produce theory-independent data that can be analyzed by applying practice theory (Willig 2013). In studying how energy poverty is experienced by households, it is how they interpret, understand and what they feel about their own situation and practices – their lifeworld – that I will explore as opposed to making an "objective" assessment of what it "really" entails to live in energy poverty. As already explained in Chapter 3, meanings, emotions, and understandings are elements of practices. Thus, how the informants *feel* about living in energy poverty is just as much what living in energy poverty is as any "objective" assessment made by a "detached" researcher. Semi-structured interviews is then suitable for the purposes of this thesis as it is often "used by those who come from an ontological position which respects people's knowledge, values and experiences as meaningful and worthy of exploration" (Seale 2018, 220). For these reasons, it is frequently used by researchers who study marginalized or unheard voices (Seale 2018). By virtue of being *semi*-structured, this method "is a highly flexible … form of social research" that can be adapted to the interviewees' unique stories (Seale 2018, 218). Indeed, it will let me explore the topics I want to cover, from coping with cold temperatures and high energy costs to the informants daily life, while at the same time looking for interesting tangents and stories surfacing during "the natural flow of conversation" (O'Leary 2017, 240).

However, regarding the theoretical flexibility, there is an apparent methodological conflict between semi-structured interviews and practice theory that must be addressed. According to Hitchings, prominent theorists of practice "are claiming that everyday practices are … so habitually done that potential respondents are probably unable to comment" (2012, 61). This is, perhaps, of particular concern for a study of energy poverty as energy practices constitute a particularly non-reflexive and inconspicuous form of consumption (Maréchal 2009). My efforts would be futile if conducting interviews about practices were to amount to trying to access what the interviewees themselves do not have access to. However, I argue that this barrier is less prominent when studying a phenomenon characterized by disproportionally high energy bills and cold dwellings. Such challenges invite more conscious and active

engagement with limited energy resources, looking for solutions having to cope to cut energy costs or stay warm. This is perhaps particularly true in Norway, a country characterized by great seasonal variations in energy needs due to changing outdoor temperatures and energy costs. Either way, in resonance with Hitching's claim that "[p]eople can talk about their practices" (2012, 61), numerous researchers have conducted semi-structured interviews with households to study energy poverty before me (cf: Brunner, Spitzer, and Christanell 2012; Butler and Sherriff 2017; Longhurst and Hargreaves 2019; Middlemiss and Gillard 2015; Petrova and Simcock 2019; Willand, Maller, and Ridley 2017).

4.2 The needle in the haystack: Recruitment strategy

When drafting the research proposal for this thesis, I realized that finding households experiencing energy poverty would be one of the most demanding and challenging tasks in conducting the study. This conception was based on several factors. Firstly, the prevalence of energy poverty in Norway seemed to be considerably low, as seen in Chapter 1. Secondly, as no research had been done on energy poverty in Norway, there were no previous studies conducted in Norway to use as guidance or inspiration. Thirdly, energy poverty touches on sensitive subjects such as low affluence and health concerns, topics that may be difficult to discuss openly with a random researcher (Seale 2018). Fourthly, when I googled "energifattigdom Norge" (energy poverty Norway) in the preliminary phases of the study, I only received a couple of thousand hits – most of which were related to Norway's development work in Africa, public statements made by the United Nations about energy poverty in the Global South, or even sugar substitutes poor on energy (calories). Eventually, the process of recruiting interviewees took over six months, involving several strategies of recruitment.

Overall, I used a variation of purposive recruiting methods. Most of the interviewees were recruited with the help of gatekeepers. The steps described below was approved by the Norwegian Centre for Research Data before any contact with informants were made. Initially, I had the opportunity to conduct the study in cooperation with the authorities of a district in Oslo. In several meetings, we discussed the logistics of approaching informants, for example by distributing an invitation letter on my behalf to housing cooperatives and public housing they confirmed could fit the indicators I used. However, upon further discussion of the logistics, it became clear that they would not involve themselves in the study out of fright of

causing vulnerable groups stress or stigmatizing them as “energy poor”. I expressed my understanding and said that it was important for me as a researcher to approach potential interviewees in a respectful and responsible manner (O'Leary 2017). However, we were not able to find a suitable, joint approach.

Having received a tip from a researcher, I contacted a representative at Leieboerforeningen (a Norwegian union of tenants). I considered cooperating with an organization for tenants highly relevant as research shows that tenants are vulnerable to energy poverty (as seen in Chapter 2.4.). However, this also risked reducing the chances of finding dwelling owners who experience energy poverty. In a meeting with the representative of the organization, she explained that they could distribute an invitation letter in various digitals channels on Facebook and contact a handful of potential informants they knew who had previously been open about problems related to the two indicators applied in the study. We however first agreed that I would at no point receive any contact information nor contact the potential informants they knew without the informants’ consent. The invitation letter was distributed digitally on Facebook and to said informants and included a question about how many times the recipients’ have struggled affording to pay the electricity bills in the past year. The representative of the organization insisted that they included a photo of me in the invitation letter on Facebook, stating that the potential informants they knew were typically socio-economically and psychologically vulnerable and would be estranged by a “faceless” researcher. Two or three interviewees were recruited via Facebook. Additionally, four potential informants that Leieboerforeningen had in mind were eventually contacted by me after having conveyed that they preferred that I reached out. Two of them responded and one was interviewed. The second informant was left out as it was not possible to arrange an interview date before data collection concluded in December 2019.

Following a tip from an acquaintance, I contacted Operation Firewood (Operasjon Ved), a small humanitarian organization who provides free firewood to around 800 people in need – primarily elders – in the Oslo area. Given that the organization works directly with households having troubles maintaining an adequate indoor temperature, it seemed highly probable that they would know of relevant informants. Particularly advantageous was that, with their help, I could ensure that the study would touch heating practices with firewood. Conversely, I risked recruiting interviewees who primarily struggle with heating as opposed to other energy related problems. However, having only been able to recruit about five

informants at this stage of the recruiting process, this was a necessary step to recruit informants.

Operation Firewood facilitated recruitment of additional informants, a process that would take two months. They were careful to protect their recipients, stating that many of them were among the least privileged in society. Before agreeing to help, they wanted to take care of a series of ethical concerns. First, they wanted to be sure that the interview guide was not invasive (it was approved without any changes). Secondly, they were concerned that conducting interviews in the home of their recipients would be perceived as a "threatening" situation by the interviewees. To accept conducting interviews in their recipients' homes, Operation Firewood wanted to be sure that I would not be intruding or disrespectful to the informants. This was done by establishing rapport with some representatives of the organization, allowing them to know me as well as explaining to them that I shared their concerns as a researcher and that the project had been ethically approved by the Norwegian Centre for Research Data. Thirdly, the executive board of the organization had to approve of the logistics of the cooperation. Eventually, we agreed that they would let me recruit interviewees by sending invitation letters to 60 recipients of firewood they randomly chose and accompany them on their delivery route. The invitation letter was signed by both me and Operation Firewood to communicate that the recipients received the letter based on cooperation between the two parts. This was enforced by stating in the letter that it was Operation Firewood who invited them to participate, while I would be conducting the interviews. All respondents were asked to provide information about the size of the household and if they owned or rented the dwelling. However, based on the impressions I had relative to who Operation Firewood gave firewood to, I assumed that most of its recipients would constitute relevant informants. As such, I decided not to ask interested informants to provide information about their problems paying the electricity bills. Eleven recipients communicated their interest by mail out of which 8 were interviewed. The remaining three were not interviewed, having responded shortly after data collection was concluded in December 2019.

The measures taken to approach informants in the ethically sound manners were concerns shared by me and Leieboerforeningen and Operation Firewood. When using gatekeepers to reach informants, it is important to avoid putting "pressure on people to participate, and try to judge whether being introduced in a particular way … may affect the interviewees and what

they say" (Seale 2018, 229-230). In short, approaching informants in the right manner was important for ethical as well as methodological reasons.

Using gatekeepers like Leieboerforeningen and Operation Firewood in recruiting is helpful when studying a hidden phenomenon where potential informants may be hard to reach (Seale 2018). However, this approach risks recruiting similar interviewees, thus, potentially hindering the exploration of new and exciting cases. However, I believe this was compensated for by using two gatekeepers as well as other approaches to recruiting. In other words, I was not relying on one channel for recruiting. While I was working out the ethics and logistics of cooperating with organizations, I was looking for interviewees on Google and social media using keywords for poverty, inequality, electricity prices and Norwegian energy policy. In a newspaper article, I found a woman open about her excessive strategies for coping with unmanageable electricity bills. Struggling with both affording electricity bills and maintaining an adequate indoor temperature, she was a suitable informant. Eventually, I also found a man talking about eating less food in response to high electricity bills and losing his housing allowance. Both were contacted via Facebook explaining that I was conducting a study related to cold winters and high electricity prices. So-called hand-picked recruiting is typically used "to study intrinsically interesting cases" (O'Leary 2017, 210).

Additionally, all informants interviewed were asked if they knew people with similar experiences as themself. Two interviews "snowballed" into three additional interviews: one interviewee found in the media referred me to her neighbor as well as her son and daughter in law living together; one interviewee recruited with the help of Operation Firewood contacted me following an interview with her mother. Snowball recruiting is "a useful technique when the study population is relatively hidden" (Seale 2018, 167) and when working with "populations that are not easily identified or accessed" (O'Leary 2017, 211). Both which appears to be the case of households living in energy poverty in Norway.

Due to budget limitations, interviewees had to be based in the region of East-Norway. Conducting interviews over the phone or digital communication services was considered a last resort and would be conducted if enough informants were not recruited in East-Norway. To acquire richer, "naturalistic data", conducting interviews in the home of the interviewees were preferred (see section 4.4. for more) My hopes in finding interviewees here was based on East Norway being the most populated region in Norway. After having conducted interviews with 18 interviewees from 17 different households, I concluded that the collected

data corpus was sufficiently large to respond to the research question of how vulnerable households in Norway experience energy poverty in everyday life within the frame of a master's thesis. Table 1 shows how the different channels for recruiting contributed to the amount of households interviewed.

Table 1: Channels for recruiting households

Channels for recruiting	Number of households
Hand-picked	2
Leieboerforeningen	4
Operation Firewood	8
Snowball recruiting	3
Total	**17**

4.2.1 Identifying relevant informants

The different purposive recruiting methods described above are "often used to access groups whose activities are normally 'hidden' from public or official view" (Seale 2018, 166). Here, common challenges with purposive recruiting methods are "to identify individuals who have the [relevant] characteristics [and] to confirm the status of those identified" (O'Leary 2017, 213-214). This was also necessary to avoid conducting interviews with informants who participated for other reasons than contributing to the study (such as receiving a gift card, which will be discussed in section 4.2.2.). In Chapter 2, we saw that households living in energy poverty may struggle to maintain an adequate indoor temperature as well as service high energy costs. Since the one does not necessarily include the other, I saw it as important to recruit informants struggling with either. The 7 households recruited with via Leieboerforeningen and snowballing were invited to participate in the study based on their self-report on two questions related to affording energy services ("How many times have you struggled paying the electricity bill in the past 12 months?") and heating ("Do you struggle maintaining an adequately warm indoor temperature during the winter?"). The question related to affordability was intentionally based on electricity bills – as opposed to energy bills in general – because electricity consumption makes up most of the domestic energy consumption in Norway (as seen in Chapter 1). By including a question related to heating,

households who freeze at home for reasons beyond the affordability of energy services were also invited (for example, individuals with special heating needs or problems with energy inefficiency). Additionally, it was important to have a question that did not exclude fuel carriers than electricity which the topic of affordability did.

For the purposes of exploring how households may respond differently to experiences with energy poverty, it was important to find informants who *feel* that they struggle with different aspects of energy poverty. By using the two subjective criteria, I side-stepped the "binary logic according to which a household is in energy poverty if it meets certain criteria" that is inherent to many definitions of energy poverty, such as the threshold of 10% of household income spent on energy expenditures (Herrero 2017, 1026). According to such criteria, a household lives in energy poverty or not. A household does not *partially* transgress the threshold of 10%. However, households may in reality make priorities that impact whether they qualify as "energy poor". For example, whether households prioritize energy or food costs will impact if they spend, say 9% or 11% of their income on energy use effectively impacting whether they "are" energy poor. However, households spending 9% and 11% of their income on energy expenditures may be equally constrained when it comes to energy use. By using subjective measures, I did not make assumptions about household priorities. Additionally, recruiting on the basis of how they perceive their own situation is important "because if families feel that they are not warm enough [or] not able to afford energy, they begin to see more extreme coping mechanisms as legitimate" which in turn may have severe implications for health and wellbeing (Middlemiss and Gillard 2015, 152). However, a weakness of using subjective indicators is that "they rely on households' direct assessment of their own living conditions and circumstances" (Herrero 2017, 1020). Therefore, self-reporting trusts that people can assess whether they are relevant informants to the purposes of the study. In practice, I was able to keep track of this weakness as interested informants typically explained at length for how long they struggled paying the bills, how they coped, problems with the dwelling and the size of the bill when signing up to participate.

However, the eight interviewees recruited with the help of Operation Firewood were not asked to report on problems related to heating and energy costs. Based on the ethical concerns of Operation Firewood as well as the descriptions given of vulnerable recipients of firewood, I assumed that the potential informants matched the criteria of struggling to maintain an adequately warm dwelling or paying the electricity bills. Additionally, as I was recruiting

these interviewees by mail, I had to consider practicalities linked to how many documents to send and steps required to sign up to the study before it would discourage participation. Three interviewees seemed rather content with their capacity to heat the dwelling and pay the electricity bills, although being vulnerable (results related to this will be discussed in the chapter Chapters 5-7).

Neither did I ask the two hand-picked informants to answer the two questions as they already seemed to be relevant cases based on the newspaper article and Facebook post where they appeared.

4.2.2 Incentivizing participation

All interviewees were given gift cards of 50 EUR, a strategy for compensating for the perceived difficulties of recruiting. For the purposes of the thesis, this was particularly helpful as studies on energy use that adopt self-recruitment approaches may be overrepresented by those particularly interested in technology and technical aspect of energy use – sometimes referred to as "early adopters" (Hargreaves, Nye, and Burgess 2010) or "expert users" of technology in such studies (Nyborg 2015). Thus, I risked getting a very narrow and technologically apt selection of informants if I did not use gift cards. However, while recruiting with financial incentives is frequently used in qualitative research, it raises methodological and ethical issues that must be considered (Head 2009). A methodological concern is that incentivizing participation may lower the chances of recruiting relevant informants and, consequently, diminish the solidity of the findings. However, as we saw in the previous section, I was able to evaluate the relevancy of most informants – those recruited with the help of Operation Firewood being an exclusion – before inviting them to an interview. An ethical concern was that, as Goodman et al. (2004) argues, financial incentives can coerce low income informants into participation if the incentive is too large to say no and, consequently, compromise the free consent of the informant. The Norwegian National Research Ethics Committees emphasize that what is being paid for and perceptions of the payment are important for ethically sound use of financial incentives (Hovland 2016). In line with their guidelines, the gift card was framed as compensation for their time and effort, as well as a token of appreciation for contributing to the study. Furthermore, the interviewees were told that they would receive the gift card also if they withdrew from participation to

avoid disincentivizing withdrawal. Additionally, some interviewees said that they found it important to participate and that they would have done so without compensation.

4.3 The 18 interviewees

The sample consists of 18 interviewees from 17 different households[4]. Excluding an interviewee who is 98 years old, the ages of the interviewees are somewhat evenly distributed between 27 and 79 years old. As seen in Table 2, the group of interviewees is rather heterogenous in terms of age, gender, occupational status and housing status (tenant/owner). However, the interviewees tend to be Norwegian born as well as female, pensioners, and recipients of social benefits. Only one interviewee has migrated to Norway[5]. Because of snowball sampling, five interviewees have some type of social relation to another interviewee[6]. Additionally, all interviewees live in urban areas (14 interviewees live in Oslo), typically in one person households and rented dwellings. The over-representation of urban households is not surprising for several reasons. Firstly, Operation Firewood – who helped recruiting eight interviewees – primarily deliver firewood to people living in Oslo. Secondly, Leieboerforeningen who helped recruiting a handful of interviewees is based in Oslo. Thirdly, interested candidates living outside of Oslo possibly refrained from signing up as the invitation letters stated that the study was a part of a master's thesis at the University of Oslo and that the interviews preferably would be conducted in their homes.

The interviewees are divided into two groups according to differences observed in the results. For the purposes of this chapter, it suffices to say that the two groups differ in terms of their financial and housing situation. These differences tend to differ according to age. A group of younger (under 60 years old) interviewees tend to rent their home and be in a relatively more turbulent financial situation mostly relying on social benefits. A group of primarily older interviewees have more stable income and may own their home or rent privately or from family members[7]. The differences between the two groups will become clearer as the results are presented in Chapter 5-7.

[4] One interview was conducted with two members of the household.
[5] H12 in Table 2. has migrated to Norway and has been living there for 20 nearly consecutive years.
[6] H3 is the mom and mother-in-law of H7, H15 is the mother of H17.
[7] The group of older interviewees also contain H5 who is in a largely similar financial and housing situation.

Table 2: General information about the interviewees related to their household, housing situation and occupational status

	Name	Gender	Age	Household size	Main income source	Group
Rents	H1	Male	48	1	Social benefits	Younger
	H2	Female	43	1	Social benefits	Younger
	H3	Female	58	1	Social benefits	Younger
	H4	Female	38	1	Social benefits	Younger
	H5	Male	33	3	80% employment	Older
	H6	Female	28	1	Social benefits	Younger
	H7[8]	Female	27	3	Social benefits	Younger
		Male	29		Social benefits	Younger
	H8	Male	36	1	Social benefits	Younger
	H9	Female	70	1	Pension	Older
	H10	Female	98	1	Pension	Older
	H11	Female	79	1	Pension	Older
	H12	Male	46	5	100% employment	Younger
	H13	Female	47	4	140% employment	Younger
Owns	H14	Male	69	1	Pension	Older
	H15	Female	72	1	Pension	Older
	H16	Female	69	1	Pension	Older
	H17	Female	44	1	Social benefits	Younger

Some of the characteristics of the interviewees are in line with groups that have been identified as vulnerable to energy poverty (See Chapter 2.4.). As seen in Table 3, there is a strong weight of one person households, female interviewees, pensioners and social benefits recipients. The three interviewees who have employment work low end job in health care, education and service (results related to the interviewees financial situation will be presented in Chapter 5). The prevalence of one person households (13 households) makes sense as such households typically depend on their own income to cover housing and energy costs. Only four households consist of more than one person: one informant living in a shared flat[9] and

[8] H7 is the only household that consists of two household members: Female 29 and Male 27.
[9] H5

three informants living with their partner and children[10]. However, the small presence of those having employment or living in large households might also be due to having less time to participate in a study due to working hours or family obligations.

Table 3: Distribution of interviewees according to genders, occupation and household composition.

	Category	Quantity
Household composition	One person	13
	Three persons	2
	Four persons	1
	Five persons	1
Gender	Male	6
	Female	12
Occupation	Works	3
	Recipient of social benefits	9
	Pensioner	6

The tendency of interviewees who rent (only four own their dwelling) makes sense as given that Leieboerforeningen helped finding four interviewees. Additionally, tenants have been identified as a vulnerable group in the energy poverty literature, as seen in Chapter 2.4. Furthermore, it is likely that people experiencing energy poverty rent as it is cheaper than buying. The same logic applies for apartments compared to detached houses: none of the informants lived in the latter type of dwelling. All interviewees above 60 years old were recruited with the help of Operation Firewood.

4.4 Approaching interview topics

While designing the interview guide, I was faced with the challenge of encourage the interviewees to talk openly about the implications that energy poverty has on their wellbeing – being potentially sensitive topics – without being invasive or disrespectful. Inspired by the approach of Longhurst and Hargreaves (2019), I based most energy related questions on

[10] H7, H12 and H16

domestic energy management in general rather than asking directly and explicitly about sensitive issues related to energy poverty. We use energy while doing most of the things we do in the home, from cooking and watching TV to simply occupying the dwelling (lighting and heating). Therefore, I suspected that asking "neutral" and open-ended questions about how they perform energy related practices, I would give the interviewees room to talk about the mundane aspects of energy use and ease in the implications energy poverty have on their health, personal finances, wellbeing and social life – if they were comfortable in doing so. For example, I would ask how often they receive the electricity bill and if its size varies rather than directly asking if the bill causes them stress. Some examples of other questions are whether they have changed electricity provider, what they think affects the size of the energy bills and what they think of the coming winter. The only energy practice mentioned in the invitation letters was heating. To compensate for this framing, questions about heating practices were reserved towards the end of the interviews to give room for discussion on other practices as well.

The downside of asking neutral questions about energy management is that I risked receiving answers about a narrow selection of topics related to technical aspects of energy and practices that directly involve the use of energy. For the purposes of the study, it was important to explore the implications energy poverty have beyond energy practices as well. Therefore, I reminded the interviewees at the beginning of the interview that energy is used in virtually all practices in the home and that "everyone" is dependent on energy in their daily life. To make the interviewees comfortable from the start of the interview, the opening questions were "trivial", revolving around who they are, their household, the dwelling in which they live and a typical day in their lives. It was particularly useful to start interviews by asking them about their motivation for participating as many would immediately talk about their coping strategies, problems paying the electricity bill or maintaining an adequate temperature indoor.

Since the interview guide was designed to make the interviewees bring up sensitive topics themselves, I had to make sure they were comfortable and that I avoided making them feel unworthy or stigmatized by a researcher objectifying them as being 'energy poor' or 'vulnerable'. Beyond establishing rapport, introducing the study and explaining ethics (confidentiality, right to withdrawal, participation upon free consent and not being obliged to respond), I was careful to approach topics linked to personal finances and problems with energy in a respectful matter. When unsure about pursuing sensitive tangents, I would ask if it

was appropriate to ask further questions or repeat the interviewees' sensitive statements in the form of a question to encourage elaborating (Seale 2018). At the start of every interview, I would attempt to reduce any social stigma by reminding them that energy consumption is not simply a product of "who we are", but largely based on impersonal factors such as the dwelling and local climate. However, if no topics emerged such as stress related to personal finances, physical and mental health, or social relations, I would ask the interviewees general questions about how energy expenses or cold dwellings affected this. The interview guide, an invitation letter and the consent form is found in appendices 1-3, respectively.

Qualitative methodologies are concerned with producing naturalistic data (Willig 2013). For the purposes of the thesis, this involved conducting interviews in a setting as close to the daily surroundings of the interviewees as possible. Therefore, the interviews were primarily conducted in the homes of the interviewees which may make it easier to get people to sit down with an unknown researcher and talk openly about sensitive topics that might be difficult to discuss in public (Seale 2018). Furthermore, it enabled me to make ethnographic observations, asking questions about impressions and observations as interviewees gave me tours of their home. It also facilitated the flow of conversations as the interviewees could demonstrate in practice how they used technology, heated the dwelling and where they spent their days, for example.

The steps taken and concerns described above to avoid being invasive, disrespectful or stigmatize the interviewees were important concerns given the intimate element of conducting interviews face to face in the home of the interviewees. Indeed, the intimacy of interviews poses "some of the most critical questions that need to be dealt with by qualitative researchers" (Seale 2018, 224). I was effectively a stranger that came into their home to study their lifeworld and subjectivity (O'Leary 2017, 240). If I did not approach them in the right manner, I could risk causing harm or getting the "wrong" answers. When studying sensitive issues, it is important to approach these "in ways that make interviewees … feel comfortable about discussing them" (Seale 2018, 232). An important part of these concerns was to be reflexive of my role as a researcher. This involved reflecting upon the ways in which "the researcher is implicated in the research and its findings [and consider] how our own reactions to the research context and the data actually make possible certain insights and understandings" (Willig 2013, 25). For example, my social positioning (ethnicity, gender, class and age) can influence the data production by making the interviewees "feel judged,

ashamed or offended, it is difficult to gather credible data" (O'Leary 2017, 241). For example, if I came across as ignorant of or surprised by their daily struggles that could effectively express the privilege I have as someone who does not live in energy poverty. For ethical reasons, it was important that my mannerisms and the questions that I asked did not create a social distance between me and the interviewee that would make them feel uncomfortable. For methodological reasons, it was important to avoid making the interviewees feel judged and lead them to – intentionally or not – censor themselves or provide socially desired responses not true to "reality". If these concerns were not respected, it would jeopardize both the ethical and methodological integrity of the study.

These concerns would prove to be important as several interviews were rather emotional in sentiment. In several cases, talking about their experiences brought forth emotions of sadness, frustration, and helplessness. Some interviewees almost breaking down crying or became visibly mad while sharing their experiences. Notably, one interviewee wanted to cut the interview short after 30 minutes when talking about his landlord and increasing rents. Feeling frustrated he confronted me, asking what I would do if I were in his situation. Similarly, another interviewee spontaneously called his landlord during the interview to demonstrate "what he is like" and the complicated relationship they had. The phone call lasted for more than 10 minutes of which all statements made by the landlord were left out of the written and recorded material as he is not participating in the study. Some interviewees also made remarks about how they thought they were less affluent than myself and that I could not relate to their situation completely. Another interviewee expressed finding it embarrassing to talk about difficulties related to energy use. A few others found it exhausting to talk about their experiences, one of which fell asleep twice within a short period of time, leading me to conclude the interview. However, most interviewees appear to have appreciated participating, some expressing that the interview provided them with an arena for discussing their problems openly or that they found it refreshing to talk about energy related problems with someone without commercial interests.

The interviews were conducted in Oslo and Fredrikstad between October and December 2019. 14 of these interviews were conducted in the interviewees' homes. The remaining three were conducted elsewhere (community center, café and Center for Development and the Environment) as these interviewees did not want or deem it appropriate to receive visitors or conduct the interview in the home. However, one of these interviewees gave me a tour of his

home following the interview. At the end of every interview, I thanked the interviewees for participating and sharing personal experiences. It was important to convey my gratitude and assert that their reflections, emotions and stories were important contributions to the study. Additionally, interviews were given the chance to clear up any misunderstandings and ask questions pertaining to the study or to me.

All interviewees were asked if I could record the audio from the interviews and explained how all data would be anonymized and stored on a safe server. All interviewees were okay with audio being recorded; however, one was initially afraid that a large audience would hear her "complain too much" if they heard the recording. After explaining to her that only a very limited number of people would be allowed to access recordings done from the interview, she agreed to be recorded. Immediately after concluding interviews, memos were written to organize and document immediate thoughts, impressions, reflections, and analytic ideas.

The timing of the data collection potentially affects the findings (From October to December 2019, the start of cold winter season). This is perhaps particularly true when studying a phenomenon that may be impacted by seasonal variations like energy poverty. There are at least two points to be made here. Firstly, during the year preceding data collection, electricity prices reached historically high levels (SSB 2020e). Notably, following the winter of 2018/2019, the Norwegian Parliament issued extra payments of housing allowance to compensate for high electricity prices (Husbanken 2019). Conducting interviews following these events and at the start of the next cold season, may have fueled expectations of another difficult winter. Secondly, the findings could have been different had the interviewees been conducted from January to April 2020 when electricity prices reached the lowest levels since 2000 (Rangnes and Lurås 2020). However, as I will show when presenting the findings, many of the interviews have concerns for winters and forthcoming bills. Additionally, these fluctuations in electricity prices are examples of the contrasts and unpredictability that households in Norway endure.

4.5 Analyzing interviews

The process of analyzing started upon entering the field. The observations made in the field and process of writing memos unavoidably inform further data production by building expectations. This happens unconsciously as observations build expectations, as well as

consciously when formulating reflections in memos about observations. Consequently, further data collection is informed by the researcher's grasp of the field becoming increasingly analytic. This is typical for qualitative research where analysis is not one separate stage among others but a continuous process that starts when entering the field and ends when writing the thesis. In fact, O'Leary writes that "it is almost impossible to 'manage' qualitative data without engaging in some level of analysis" (2017, 326). Notably, a first series of interviews with interviewees under 60 years old primarily using electric heating, I started interviewing pensioners with fire stoves. Once all interviews were conducted, memos were eventually developed into longer field notes to summarize impressions and analytic ideas. Writing memos and field notes was considered important to record immediate impressions and ideas immediately after interviews as opposed to only analyzing transcriptions which are like partial, textual translations of the social situation that an interview is (Seale 2018, 497). Additionally, the audio recordings of the interviews were all transcribed by me. Transcribing was important to satisfy "the pressing need for ongoing rich engagement with … the raw data" as well as grounding the analysis in what was said as it was said (O'Leary 2017, 330). By interviewing, transcribing, and analyzing the transcriptions myself, I was constantly engaged with the data throughout several steps.

Thematic analysis was used for "the final analysis" (Seale 2018, 268), namely the process of analyzing transcriptions. Having more than 200 pages of transcribed material, thematic analysis was useful to discover patterns across interviews and reduce the raw data into a meaningful essence in the form of codes and themes (Seale 2018, 430). Thematic analysis also fit the practice theoretical framework of the thesis since it is not "tied to a particular theoretical approach" (Willig 2013, 58). To ensure that the analysis was firmly rooted in the raw data, I decided to follow Seale's guidelines for open coding (2018, 433). This process aims at constantly being open to new patterns and perspectives by "building your codes up with progressively more data". This is done by first immersing oneself in the data and coding informally, before coding more formally at a later stage (Seale 2018, 433). Codes are "labels for chunks of data that capture something of the literal essence of the data" and typically reflected the interviewees' lived experiences and perceptions of different dimensions to energy poverty (Seale 2018, 433). Initially, I coded superficially while transcribing with the simple "aim to get down a word or phrase that describes the data well and does not involve any interpretation" (Seale 2018, 434). The preliminary codes resembled general and open

categories such as ‘high electricity bills’, ‘energy-related negative emotions’ and “social stigma”.

The more formal coding process involved using the software NVivo 12 to organize the codes. In developing the codes, I was trying to capture what was perceived, how it was perceived and by whom, while looking for how frequently the perceptions surfaced, in which contexts they did and if there were any contradictions being made. The perceptions that surfaced were often related to energy use, to the unaffordability of energy, to how practices and social relations are affected by constrained energy use as well as to who the interviewees assign agency and responsibilities to. The coding process involved reading all the transcripts multiple times, coding new themes that appeared while constantly being open to revision, merging and deletion of old codes, sometimes coding line-by-line to ensure that “new and unexpected themes may be captured” (Seale 2018, 434). As I went along coding, I wrote memos to keep track of the coding process and justify to myself why certain codes were merged, deleted, or redeveloped. Memos were also important to ground the analysis in the coding process and the decisions made as I went along, not only in the codes themselves. This last stage of coding ended when saturation of themes was achieved, namely when further revision only led to minimal changes and when codes appeared to be adequate reflections of the data material. This entailed having developed themes describing factors that the interviewees perceive to cause their energy poverty, how this affects their practices, whether they have agency and are able to cope, as well as how they feel and perceive themselves as energy poor. In doing so, I coded inductively letting the data “speak for itself” and remain sensitive to the meanings in the data. This was suitable to explore what is important to the interviewees, not knowing beforehand what households living in energy poverty in Norway find important (Seale 2018, 431). Especially important was it given the open-ended and “neutral” questions of the interview guide which opened for tangents and unexpected topics to surface during the semi-structured interviews.

Quotes used in the presentation of the findings were translated at the final stage of writing up the thesis. This was done to make sure the analysis was grounded in the original data and to avoid unconscious re-interpretation of quotes after translations had been made. In cases where it was difficult to translate adequately what the interviewees were saying, I have put the Norwegian word or expression in italics in square brackets.

5 Housing and finances

In this chapter, we will look at the financial and housing situation of the interviewees. As seen Chapter 2.3., low income and the energy efficiency of the dwelling are two central causes of energy poverty who affect the affordability of energy. The interviewees in the present study have low incomes and most inhabit cold, poorly insulated apartments. Most would be defined or close to be defined as income poor according to the EU's threshold of incomes below 60% of national median equivalized disposable income equal 1840 EUR per month in Norway (SSB 2019a). Many regularly economize and live modest lifestyles to make ends meet. However, the interviewees can be divided into two groups according to how vulnerable they are.

In the two following sections, I will further elaborate on these two groups, underlining the financial and housing related factors that distinguish them from one another. These factors tend to correlate with age. The younger interviewees are all working age (the oldest is 58 years old) and consists of interviewees who work or receive social benefits[11] while two are employed. Most have had unstable incomes for years and most rent cold and old dwellings. The group makes up almost two thirds of the sample and largely consists of the most severe cases of energy poverty. The older interviewees are primarily pensioners of more than 69 years of age who receive stable but low pension. In addition to having stable incomes, they generally have better housing conditions.

5.1 Hands tied: The young interviewees

Most of the interviewees belong to the group of those under 60 years old (11 out of 18 interviewees). They are typically in a rather unstable financial situation. Most of these live alone and depend social benefits after having endured accidents, suffered from work injuries or chronic and psychological illness. Making ends meet has been difficult for years, notably because of increasing housing costs such as rent and electricity and unstable entitlements of social benefits. Table 4 contains general biographic details about the younger interviewees.

[11] Social benefits do not here refer to a specific benefit. As section 5.1. shows, the interviewees receive different benefits.

Table 4: Biographic information about the younger interviewees

Household ID	Gender	Age	Household size	Occupancy	Location	Occupation
H1	Male	48	1	Rents	Oslo	Social benefits
H2	Female	43	1	Rents	Oslo	Social benefits
H3	Female	58	1	Rents	Fredrikstad	Social benefits
H4	Female	38	1	Rents	Oslo	Social benefits
H6	Female	28	1	Rents	Fredrikstad	Social benefits
H7	Male	27	3	Rents	Fredrikstad	Social benefits
	Female	29		Rents		Social benefits
H8	Male	36	1	Rents	Oslo	Social benefits
H12	Male	46	5	Rents	Oslo	Works 100%
H16	Female	44	1	Owns	Oslo	Social benefits
H17	Female	47	4	Rents	Oslo	Works 140%

Most interviewees relying social benefits express that it is difficult to receive the financial support they need. Many have been battling the welfare system for years to get permanent disability benefits. However, many have been stuck for long periods on temporary and lower rate work assessment allowance (arbeidsavklaringspenger, AAP) – a benefit supporting people with work capability reduced by at least 50% (NAV 2020e). AAP provides a yearly income of at least 1600 EUR[12][13], but is given for six months at a time (NAV 2013). According to NAV, the intention of AAP is to support people financially while they attempt to get back into working fulltime(NAV 2020e). While receiving AAP, NAV obliges recipients to follow certain "duties to act" such as completing an activity plan for getting employed, gradually increasing the amount of work hours, and doing tests of work capability every sixth months. Interviewees who are or have depended on AAP describe it as a psychologically turbulent financial situation to be in. They feel too ill to work, but risk losing the AAP if NAV deems them capable of working after work capability tests. Although one cannot typically receive AAP for more than a total of three years (NAV 2020e), several interviewees report having received it for more than a decade. A 28-year-old woman who is

[12] All currencies in the thesis have been converted from NOK to EUR according to an approximate exchange rate (1:10) for the period in which the data was collected (October-December 2019).
[13] At the time of conducting the interviews, the Norwegian government had proposed reducing the yearly income for new recipients of APP under 25 years old by 6000 EUR.

unable to work due to a depressive disorder claimed NAV broke the law by keeping her on AAP for nine years. She explained that she became more ill by having to document her illness and incapacity to work continuously over the years:

Question:	So NAV has broken the law?
Female 28	Yeah, because they're not supposed to give you work assessment allowances for so many years. Without going into the details, I've been going to therapy and received documentation from doctors and therapists and all kinds of things [*alt mulig rart*] for the stuff I've been dealing with. Black on white. But [NAV] has sort of ignored it, referred me elsewhere and made me more ill until the breaking point [*bristepunkt*] where I have broken down, both physically and mentally.

Most of the nine interviewees who depend on social benefits eventually received disability benefits (uføretrygd) – "a secure income to those who have a permanently reduced earning capacity due to illness or injury" (NAV 2020b). Disability benefits provides a monthly income of a minimum of 1900 EUR (NAV 2020a). The process of receiving AAP support to disability benefits is described as a long and technical journey of declined applications. Interviewees express that they do not receive the necessary help to carry out the application properly, virtually leaving them to "be the advisor (saksbehandler) of their own case" in the words of one interviewee. When an application eventually reaps benefits, it is experienced as a great victory. A 43-year-old interviewee suffering from multiple depressive illnesses finally received disability benefit shortly before the interview was conducted after 25 years on temporary social benefits. Although not having a significantly higher income, she describes her financial situation as largely improved due to increased stability:

Female 28	It is such a relief not having to talk to NAV and listen to all their nagging … but right now, I don't necessarily have more than I had on AAP, but it is a regular income that comes once a month no matter what and it can do so for the rest of my life. So now I have the stability in terms of paying bills, always having money. That stuff is kinda always in order [*alltid på plass*].

However, despite receiving upgrades to disability benefits, many continue battling the welfare system to receive what they claim they are entitled to. Several of the interviewees under 40 have not received the disability benefits of a "young disabled person". This status is given specifically to those having become unable to work due to permanent illness before the age of 26 and would make them entitled to an additional 300 EUR per month in disability benefits – a minimum of 2200 EUR per month (NAV 2020d). Additionally, several interviewees experience that it is so difficult to qualify for certain benefits that such benefits are more akin to illusory than real benefits. Notably, a handful of interviewees complain that they are not

"poor enough" for housing allowance "a government-financed support scheme for partial coverage of housing expenses for households with low incomes" (Husbanken 2020). This lead one interviewee to refer to housing allowance as a fata morgana (mirage):

> Male 48 — Housing allowance is something we *hear* that people get. I know no one who gets housing allowance, who have disabilities [*er uføre*]. I know no one! So housing allowance is a fata morgana for me, I know no one! You have to understand one thing, it is calculated on the basis of your social benefits, so someone has used the opportunity to set the disability benefits, say 10 EUR, too high to receive housing allowance.

The perceived disharmony between disability benefits and housing allowance was shared by a 36-year-old former opioid addict who, until a year before the interview, had been living for years on the street and in rehab. Having high housing costs and the low income through AAP, he was entitled to housing allowance. When his AAP was upgraded to disability benefits, he finally thought he would have relatively stable and comfortable finances. However, the joy was short lived as the disability benefits would automatically rob him from housing support. The margin that made him ineligible to housing allowance was minimal and appeared to be linked to monthly electricity costs, but he found it difficult to understand the details of the entitlement:

> Male 36 — I lost my housing allowance because I received 12 euros above what is… well… something. I don't even know what it is . And they say I should have 53 euros in electricity regularly, that's what they count as regular electricity everything. If you have higher than that, or something. I don't understand these things myself, they, they make me tired. It's too much.

Two interviewees in this group are employed. Both carry the burden of providing for their family, while their partners stay at home being unable to work. With low incomes and many to provide for, they are in a financially constrained situation – a 46-year-old man even expressed that his motivation for participating was that he perceived himself to be poor. He provides for his three children and wife with an income of 2500 EUR a month – more than half goes to pay the rent. Previously, he worked 150%, but an offer for a permanent position left him unable to juggle multiple jobs. Originating from a country in South America, he and his wife's university background from back home is not approved in Norway. Additionally, his wife is unable to find a job due to poor Norwegian skills. The family then depends on the 46-year-old man's income and child benefits of 300 EUR per month. Notably, his wife has not been living in Norway for the required three and five years to qualify for social benefits such as AAP or cash-for-care benefit respectively (Lovdata 2020; NAV 2020c). The fact that

he is a Norwegian citizen and has been living in Norway for nearly 20 consecutive years does not change the situation:

> Male 46 — We don't have the same rights as an equivalent Norwegian family would have, like getting off work to have so-called paternity leave for dads [*pappaperm*]. Not entitled to it. Cash support, my wife aren't entitled to it … And I can't get paternity leave because it is an entitlement tied to the mother's income … Norwegian laws have safeguarded itself [*sikre seg mot*] a lot against giving a little bitt too much to us foreigners or who have something to do with being a foreigner.

The two employed interviewees have endured periods of intensive working to make ends meet. A 47-year-old woman providing for her chronically ill husband and two children had to take additional shifts to avoid losing the apartment she and her family occupied at the time after receiving a backlog electricity expense of over 2300 EUR:

> Female 47 — I just had to work a lot more, but then I got very tired afterwards when that period was over. But I had already decided how I would do it, work, work, work, work, work, work. I think it lasted for almost 6-7 months, just work, work, weekend, weekdays, evenings, day, night … I left seven in the morning and I wasn't home before half 11 or 11 every day almost, in the weekends also.

The financial situation of the younger interviewees is reflected in their housing situation. They all live in cheaper apartments primarily in less affluent suburbs in East-Oslo or decentralized suburbs in Fredrikstad. Most rent apartments in apartment buildings or duplexes, with two of them renting in public housing. Only one of them has been able to purchase an apartment. The interviewees' apartments are typically old and poorly insulated. Some of them were not constructed with energy efficiency in mind, such as unoccupied lofts that were superficially renovated to be turned into bedrooms or houses split into multiple dwellings to be rented out for profit. Many apartments need maintenance and repair of deficiencies such as electric sockets hanging out of walls, stoves that only work partially, broken electric radiators and floor heating, mold, old sewage pipelines that give off bad smells when temperatures change quickly and leaking sinks and showers:

> Female 28 — There were a lot of problems [*mye gærent*] with the apartment when I moved in. This has nothing to do with electricity, but the floor sinks in towards the middle. It does so in the bedroom too. There is water damage [*fuktskader*] on the floor. I had no wardrobe at all, so I had to build that myself. All cabinets and drawers were broken. The apartment should perhaps be repainted, but it was yellow from smoke all over when I moved in. It smelled horrible.

Several interviewees find it difficult acquiring adequate housing. When they previously have changed flats, they have had to weigh needs for a flat in a decent condition, practical

implications such as transport, the vicinity of friends and family and the price of the rent. Having low incomes, these needs rarely overlap. For some, living in their current apartment is the best perceivable offer they have seen in a while. Some even find their status as recipients of social benefits to negatively impact their chances of finding adequate housing. While explaining how she ended up in her current apartment, a 28-year-old woman said:

> Female 28 — I was looking at apartments all over town actually, so it's very difficult to get an apartment in Fredrikstad. It's become very popular for students and stuff, so every apartment viewing I went to there were 20-30 people who had been there in one day. And if you have nothing to show for like a job or studies, you're deprioritized immediately.

Interviewees living in public housing in Oslo also perceive their housing conditions to be poor. A 48-year-old male interviewee spent the past 10 years "apartment hopping" around the block in public housing as rents kept increasing. In this period his rent nearly doubled. He now pays close to 1000 EUR per month for a worn-down apartment where he is obliged to keep the kitchen fan running at all times to avoid mold development in the bathroom. He explained that he felt stuck in the apartment, having nowhere else to move:

> Male 48 — People who have a snowball's chance, they get out of here as soon as they can, because the rent is high … the layout of the apartment is terrible, the flat is worn down and we pay out of our… we pay too much … They send out a magazine [blekke] called Bo Bra every second month or something, with advertisement for *how great isn't it to live in public housing*. I've begun to tear it apart.

Apartments with poor insulation and draught are common. Interviewees describe thin windows, poor sealing strips, entry doors freezing shut, frost on the inside of windows that will not shut completely. This is not compensated for by neighbors' heating as most share only one wall with a neighbor. Most live on the ground floor or on top of cold basements – sometimes several stories deep. A combination of such factors leads to cold dwellings:

> Male 46 — There is a basement beneath us that is not in use, that has made it extra cold, so this is a nice house to live in during the summer. But as you see, the cold comes from the outside, we do not have an immediate neighbor on three out of four walls, so in an apartment downtown [Grunerløkka] you've got a neighbor heating left and right and downstairs. So you're spending less money to stay warm. We have to heat for all we've got [*for alle penga*]

The interviewees who have downstairs neighbors do not necessarily live in warmer dwellings. A 27-year-old male interviewee – living with his girlfriend and daughter in kindergarten – has even considered paying his neighbor to heat more:

Male 27 We hope it helps that the neighbor is heating a bit, that he is using the fireplace and stuff. I've considered buying him firewood to heat more.

The interviewees have few incentives to invest in the energy efficiency of apartments they rent. If they were to move elsewhere, they might not profit from the investments made. Additionally, landlords are rarely described as willing to help by investing in improvements. If they do, some interviewees are afraid that it will lead to higher rental costs.

Female 28 I'm afraid of, if the rents go up to 650 or 700 euros, I've only got max 600 a month to get by, to spend on electricity, phone, internet, food, transport.

For interviewees, it thus makes more sense to focus on making ends meet short-term rather than making long-term investments. Many feel that the costs of living steadily rises, while their income stays the same. Many who are too sick to work have high costs linked to medication and transport to hospitals. Additionally, interviewees see increasing energy and rental costs, toll roads appearing, having to pay for TV despite not having a TV.

Female 58 I'd say that is not only electricity, but we've got toll roads, TV license, we're forced to pay a whole load of fees that affect us extremely. And I who have chosen to not have a TV, not a radio, I'm forced to pay for TV license. Then their cranking up [*skru opp*] fee after fee after fee, and smearing [*smøre på med*] toll roads on top of that, only making it harder and harder for people to live. I have no alternative, I'm on disability benefits, I can't work.

Having unstable incomes, experiencing rising living costs, and living in cold dwellings, many endure significant financial stress. One interviewee described the financial constrains he endures as an illness that is a barrier to making good decisions:

Female 48 If I had everything in order I wouldn't have to think like that. It's a mechanism that kicks in when you feel financially constrained [*kjenner på dårlig råd*]. There's a lot of researchers that… the research indicates it. People aren't spending their money like drunken sailors because they're stupid, they spend it stupidly because they're poor.

We have now seen that a large share of the interviewees is in a financially constrained and turbulent situation while living in dwellings in poor condition. They find it difficult to acquire financial stability, leaving them with little perceived capacity to influence their situation as well as with the feeling of being stuck, both figuratively in the welfare bureaucracy and physically in cold apartments. Additionally, many feel stuck in cold dwellings in poor condition, having nowhere else to go. In the next chapter, we will see how these aspects contributes to struggles of heating at an affordable cost. But first, we will look at the second group of interviewees.

5.2 Room to maneuver: The older interviewees

A minority of interviewees (7 out of 18 interviewees) is in a more stable financial situation compared to the younger interviewees. The group consists of mostly pensioners over 69 years old who receive minimal state pension (minstepensjon) of between 1700-2200 EUR a month or a marginally better pension (NAV 2014). In addition, a 33-year-old man who is employed belongs to the group, providing only for himself and splitting housing costs with two flat mates. While the *size* of their income is comparable to the younger interviewees, the older group has more *predictable* incomes. Notably, the interviewees in this group did not mention having problems with the welfare bureaucracy, not receiving benefits they are entitled to or having to work overtime.

However, while these interviewees' financial situation is relatively stable, they remain constrained. Most have not been able to build up full pension and the only one of working age only works 80%. Three pensioners have fallen chronically ill before retiring, in one case causing the pension of a 69-year-old man to be 300 EUR lower than the disability benefit he received before retiring. Furthermore, the three women over 70-year-old belong to a generation when women were not a significant part of the work force. They have lived as housewives mostly depending on the income of a husband. However, some of them have worked part-time. These three women have seen their financial situation change due to divorce, husbands dying or falling ill. Table 5 contains general biographic information about the older interviewees.

Table 5: Biographic information about the older interviewees

Household ID	Gender	Age	Occupancy	Location	Occupation
H5	Male	33	Rents	Oslo	Works 80%
H9	Female	70	Rents	Oslo	Pension
H10	Female	98	Rents	Oslo	Pension
H11	Female	79	Rents	Oslo	Pension
H13	Male	69	Owns	Oslo	Pension
H14	Female	72	Owns	Oslo	Pension
H15	Female	69	Owns	Oslo	Pension

A 98-year-old woman explained that her husband died before a wave of growth in wages, leaving her with a smaller pension than if he had died later:

Female 98	I'm a minimal state pensioner (minstepensjonist), because my husband died before the colossal rise in salaries [*begynte å stige så kolossalt]* and of course I get pension adjusted from that period, 30 years ago.

These women must live modestly when their husbands' income disappears. A 79-year-old woman solely depends on her own pension after her husband recently fell ill, spending his entire pension to stay at a care home while she lives alone at home. Used to having some extra money at hand, she must now spend her means more carefully.

Female 79	I'm limiting myself like that regarding the one or the other [*det ene og det andre*] now because I think my pension is little compared to what we used to have.
Question	In what way is your situation different now?
Female 79	Because back then I used my husband's pension as well. It was he who paid the rent and all sorts of things. My pension was just for when we needed more. When we would buy something extra, because I have never made a lot, because I have never worked fulltime.

The interviewees in this group generally have better housing conditions. The tendency of renting cheaper, poorly insulated apartments in less affluent suburbs is weaker in this group compared to the younger interviewees. Additionally, everyone excluding the 33 years old man has a fire stove in addition to electric heating. Although most live in less affluent East-Oslo, none in this group live in the least affluent suburbs. Two also live in affluent suburbs in West-Oslo. Only two rent privately, while two rent apartments from their children who own and occupy the same building. Additionally, three own an apartment. The interviewees in this group generally complain less frequently about deficiencies, the energy inefficiency and condition of the dwelling. Additionally, they report having made some larger investments in insulation such as changing windows and doors – investments none in the first group have done. This gives the impression that the energy efficiency of the elders' dwellings is comparatively better than the apartments of the younger interviewees. However, having low incomes most of these interviewees mainly rely on smaller improvements in energy efficiency:

Male 69	There's a draft coming from the window, you know. Because these windows, were changed in '86. In the kitchen I have one of those, sealing strips, that my brother in law have put there [*dytta inntil*].

Consequently, most of the elders live in apartments that are difficult to heat and experience problems such as due to draught, receiving little heat from neighbors and doors or windows

that will not shut completely. In an exceptional case, a 69-year-old woman is not even allowed to insulate her apartment as it is protected by the Norwegian Directorate for Cultural Heritage due to a historical connection to a Norwegian performer of culture. The old apartment is, thus, susceptible to heat loss:

Question:	How stable is the warmth here, does it disappear quickly?
Female 69	Yeah, cause the house is so badly insulated that if you're not making sure to keep it warm it disappears really quickly. That hallway is like a hole in the wall [*varmesluk*].

Two women benefit from renting apartments in buildings inherited and occupied by their own children. Having let their children inherit the building, these interviewees have in return received stable and cheaper rent, aid in insulating the apartments as well as an assurance that they can stay there for long. Consequently, these women are not concerned with having to move:

Female 79	We have this deal that the housing costs should be low, cause I've given him the house. So I can live here as long as I need to, for as long as I live. So if he must sell against all odds, he would have to buy me an apartment.

The woman cited above also had the benefit of paying her son a fixed price of electricity a month (150 EUR). Additionally, he has insulated her apartment and provides her with significant free firewood. She can, thus, use heating services without being concerned with rising costs. Consequently, she is one of the interviewees the most content with their housing situation.

The youngest interviewee in the group, a 33-year-old man, is the only one working. Working 80% at a low-end job, he receives a stable monthly payment. Contributing to his relatively stable financial situation is that he only provides for himself and splits housing costs with two roommates that rent the apartment they live in. Additionally, he had until recently been living for four years without paying for electricity. Not signing up for an electricity subscription upon moving in, he never received any bills. However, he now pays for electricity after having signed up for a subscription – out of fright of receiving a sudden backlog expense – after previous roommates moved out. Of all the interviewees in this group, he lives in the apartment in the poorest condition. However, he is content with the poor standard that gives more leeway for living carelessly there:

Male 33 I'm fine with it being so unrenovated [*uoppussa]* and worn down [*slitent*] as it is. Cause then we can get a little rough as well [*herje litt*], we've had a lot of parties, played music and arranged concerts. It's nice to not be afraid of damaging the floors.

Most interviewees in this group appear to have settled with living within the boundaries of their finances – boundaries that are more clearly defined given their relatively stable financial situation. They appear to have greater control of their financial situation, living rather modest and secluded lifestyles and being content with spending much time at home and mostly socializing with a small circle of friends, family members and neighbors. These interviewees appear to have become apt at managing their finances and living within their financial means.

Female 72 I'm not complaining, I get by. But that's because I'm very reasonable. I prioritize, I'm not travelling and buying and shopping and living lavishly [*leve i sus og dus*]. Cause I know that I need money for the monthly bills, but of course I could've lived lavishly and then, suddenly, not have had cash to pay the bills, what do you do then? Maybe you're put on the street, I don't know, I have never experienced it because I'm reasonable like that.

Many interviewees link their capacity to make ends meet with being used to living sparingly and skillful at managing finances, calculating and logging monthly expenses. A few also receive help in managing finances from family members. However, despite enjoying stable financial situations and being rather content with their lifestyles, these interviewees are still vulnerable to rising energy costs.

Female 69 I am very economical and the type who has organized my finances and I put money on the side to make sure I have enough. I know which bills to pay every month … I've just gotten used to it, but if the electricity bills were to double in size, I think it would've been really tough. I would find that very difficult, then it would really start to affect my daily life [*gå utover ting*].

5.3 Conclusions

The findings echo the tendency of energy poor households to have low incomes and inhabit energy inefficient dwellings, as presented in Chapter 2.3. However, the two groups differ in how vulnerable they are. The younger interviewees have unstable incomes depending on social benefits and spending years going through bureaucratic application processes to receive entitlements. When they do receive upgraded benefits, they may consequently experience the loss of another. The interviewees who have employment also experience trouble with social benefits and are sometimes forced to work overtime to provide for their family and an

unemployed partner. Furthermore, they find it difficult to acquire adequate housing, often having to settle with renting cold dwellings in poor condition. Mostly consisting of tenants, the younger have few incentives to invest in improving the condition of the dwelling themselves and while they were to ask landlords to make such investments, this could result in an increase in rent. The fright of rents increasing is further linked to a perception of housing and living costs generally rising, while their income mostly remains largely stagnant. Consequently, many are frustrated not knowing how to scrape by.

The older interviewees are in a comparatively stable financial situation. Although the size of their income is relatively equal to those of the younger interviewees, they receive predictable payments every month and do not go through lengthy processes in claiming entitlements. Furthermore, they seem content with living modest lifestyles and do not express concerns about their personal finances long-term. The dwellings in which the elders live are in a better condition than those of the young. Additionally, the elders mention more frequently to have made investments in energy efficiency. Especially owner-occupiers and those renting from family have made a few larger investments in insulation. However, their investments appear to be limited by low incomes and, thus, many still tend to live in cold dwellings.

Having explored the income and housing dimension to the households, we will see how the interviewees struggle to heat the dwelling adequately at an affordable cost in the next chapter.

6 Performing the role as energy consumer

Outdoor temperatures vary greatly from season to season in Norway, with wintertime being particularly cold. The annual lowest temperatures measured in Oslo the past five years have been between 12-16 degrees Celsius (Norsk Klimaservicesenter 2020). Most households use electric heating which typically causes a demand-driven increase in electricity prices – a central cause to energy poverty as seen in Chapter 2.3 – during the winter. Household expenditures on energy, therefore, increase for two reasons: 1. cold temperatures increase the need for heating and 2. higher electricity demand increases the cost of electricity per unit. The households in the present study are subject to these tendencies as well, primarily using electricity (see Table 6. for information about the households' access to different fuel carriers).

In this chapter, we will see how interviewees experience and manage changes in energy costs. The chapter is divided into three sections exploring how the interviewees struggle to heat adequately at an affordable cost, how they struggle to predict and understand energy costs and whether they trust that electricity supplier[14] can help them out.

6.1 The challenge of heating adequately at an affordable cost

In the previous chapter, we saw that the interviewees have low incomes and live mostly in energy inefficient houses. Many interviewees are additionally vulnerable to energy poverty insofar they constitute single income households, making them dependent on one income to cover energy bills. Additionally, most interviewees – namely the pensioners and social benefits recipients – spend more time at home exposing them more to inadequate energy use. For these reasons, wintertime is a particularly difficult season for most interviewees financially. Additionally, when the outdoor temperature drops, the temperature in their

[14] In this thesis, electricity supplier is used to refer to two actors: It is a translation of 'strømleverandør' which the interviewees most often use to refer to companies supplying energy, but also sometimes to refer to companies producing electricity as well. 'Grid company' (nettselskaper) is used in contexts where the interviewees explicitly refer to the grid and grid tariffs. 'Electricity company' may be used to refer to all these companies.

dwellings drops as well – leading to cold walls and floors. In short, their need for heating is dictated by outdoor temperatures:

Female 70	It's the weather that decides, the cold outside decides if I spend a lot or little.
Female 38	When we're approaching the end of December and January, and it's minus 15-20 degrees, it's biting cold [*da biter det*], you have to crank up the heat.

Heating the cold dwellings is not merely a matter of flipping a switch or adjusting the thermostat to a preferred level. Depending on low incomes and living in cold dwellings, many interviewees heat only specific rooms or keep movable electric radiators near themselves to get the most out of heating services (Coping strategies will be presented in Chapter 6). Others must set the thermostat to max to achieve a perceivable difference in temperature. However, many still freeze throughout the winter:

Female 98	I feel like I'm always freezing. Yesterday I thought *go to bed, maybe you won't freeze like that then*. But I'm not going to do that, go to bed.
Male 46	It's like that these days, I was at work and my four-year-old [son] called me saying *Daddy, I'm freezing*, you know. That's a message that hits you right in the heart.

Interviewees describe summers as relatively comfortable when there is little to no need for heating and, consequently, when electricity bills are at their lowest. Electricity costs fluctuate drastically from summer to winter.

Table 6: Fuel carriers used by the households

Fuel carrier	Quantity
Electric heating with or without other fuel carriers	17
Only electric heating	7
District heating	1
Firewood	9

The size of the electricity bills tends to steadily grow from the start of fall until winter. Almost all interviewees experience a peak of electricity costs between 180 and 300 EUR per month during the winter. The peak may last for several months and, for many interviewees, consumes close to 20% of their monthly income in the colder half of the year – greatly surpassing the 10% threshold of energy poverty presented in Chapter 2.1. In a few exceptional cases, the peak is close to 450 EUR a month. This peak in electricity costs may last several

months into spring, only to drop right before the summer (typically to around 50-100 EUR per month). However, increasing bills are not indications of a comfortable lifestyle. Rather, interviewees use energy services carefully, while others heat intensively without little effect:

> Female 28 The bills last year were at around 200 euro a month and then I wasn't using electricity at all. I had one [movable] convector heater[15] like that, there, I had no electric radiator [*panelovn*] or anything.

> Female 47 [My son] were having a friend over a while ago and then his friend said *it's so cold in your room* and my son replied that the heating is on, it was set to max. But still when they talked there were steam [*frostrøyk*] coming out of his mouth, then you know it's really cold.

The latter interviewee also experienced exceptionally high electricity costs during the summer.

> Female 47 During the summer I saw that we had electricity bills at almost 200 euro. And we were rarely using the radiator. And it was really warm that summer and we were barely here.

Many find it unbelievable that they must pay hundreds of EUR a month for little comfort. This has led some to ask their electric supplier about how high electricity costs would be expected from a household and dwelling of their type. A 36-year-old man who was previously addicted to opioids and now depends on social benefits, lives in a cold two-room apartment in the basement of his landlord. He was informed by his electricity supplier that he should pay between 30-40 EUR a month during the winter, while he was paying close to 300 EUR. Furthermore, a 44 year-old mother who is unable to work and who lives on top of a cold basement explained at length all the adjustments she had made to reduce energy consumption, from shutting all technology completely off after use, to using blankets as primary source of warmth. When she lived with her teenage daughter, she would rarely heat when she stayed at home while the daughter was at school. Frustrated with her high electricity bills, she called the electricity provider who confirmed that her consumption level of 18 000 kWh was high – nearly the double of expected levels – exceeding the national average of 16 000 kWh (as seen in Chapter 1):

> Female 44 It's should be at 10 000 I was told. And we weren't doing anything extreme, we were thrifty, you know.

[15] The convector heater is a small electric heater. The informant is exaggerating when saying she did not use any electricity at all.

Beyond making such inquiries, no interviewees mentioned finding definite answers to the problem or electricity suppliers taking further action or investigation of the case.

Many interviewees experience difficulties paying the bills and, consequently, must balance between what is affordable and comfortable use of energy services. With fluctuating electricity costs, it is difficult to predict the size of the next bill and many receive surprisingly high bills. The interviewees express that they might be able to service one high bill in the winter. However, having low incomes, their personal finances are drained when such bills arrive month after month. In the most difficult periods, some must incur debt or postpone paying other loans to avoid electricity bills going to debt collection. As exemplified by two interviewees:

Question:	Is that also debt in electricity?
Male 27	It started in the first apartment, cause then we didn't have that much debt. I don't know if the bill went to debt collection, but we got a payment deal on one electricity bill and it was that one that started setting us back financially and then that made us get other debt as well, because we to pay so much in electricity.
Female 43	Right now I have two that I shall pay. I got a payment deal on one and I'll pay the other before it goes to debt collection.

However, not all interviewees endure cold temperatures in the home because they cannot afford to heat comfortably. Several interviewees disregard energy costs and struggle with reaching an adequate indoor temperature mainly due to problems related to energy efficiency. The different concerns for adequate heating and cutting costs are observed in two responses to cold temperatures: setting thermostats on low to cut costs or at maximum in hopes of achieving comfort:

Male 27	It's set to 15-16 degrees, but it varies a little [*litt opp og ned*] when I turn it on.
Female 98	What in the world am I supposed to do because I'm always freezing? And I don't know what I should do with the electric heating, those in here are set to maximum (30 degrees Celsius). Those in there are set to maximum and it's not warm in here.

The younger interviewees who struggle the most with the affordability of energy may alternate between setting the thermostat to low and high depending on whether their concern for staying comfortably warm or cutting energy costs is the greatest of any given moment:

Female 58	Every now and then, days when it's really cold and rough [*surt og kaldt*] and I'm freezing and feeling a lot of pain, like that. I'll tell myself that tonight we're going to enjoy ourselves, so I crank up the heat and then it's really nice and warm, then

I go to bed and turn it down again. I can't afford going about like that, you know. It's sad.

While the interviewees predominantly struggle with maintaining an adequate temperature, not all interviewees are concerned with heating. One interviewee has district heating included in the rent and does not struggle with heating the apartment. Consequently, she has the lowest energy costs of all interviewees (between 45-75 EUR per month from summer to winter) by a margin of more than 75 EUR. However, she has had a hard time paying the bills from time to time having an unstable income from work assessment allowance.

The older interviewees typically struggle less with the affordability of energy services. Not only do they have more stable incomes, almost all have a fire stove (the 33-year-old man in the group does not but has the privilege of splitting energy costs with his flat mates). Heating with a fire stove in addition to electric radiators makes it *easier* to stay comfortably warm. Many describe the warmth produced by fire stoves as preferable and several interviewees report spending days and evenings in front of the "cozy" fire stove when they feel particularly cold. Furthermore, having a fire stove makes heating more *affordable* as interviewees can bulk up and store cheap firewood in preparation for the winter. The interviewees in this group who are concerned with affordability, can more flexibly alternate between heating with firewood and electricity according to what is the cheapest. The few pensioners who seem content with the indoor temperature described this as crucial for affording heating. For example, in the case of a 79-year-old woman rents from her son and pays him a fixed price for electricity (150 EUR per month):

Question:	Are you able to heat the apartment adequately?
Female 79	Sure, but I must use firewood during the winter. I can't depend on the electric during the winter, it would be too cold, too much electricity use. I can't afford that.

All in all, having a fire stove is a privilege the younger interviewees do not underestimate:

Male 27	The dream is simply having a fire stove. That would solve a lot of problems, I think.

However, heating with firewood is also linked to practical difficulties in acquiring the fuel: heavy sacs need to be transported often several kilometers from the supermarket to the home. Among the few younger interviewees with a fire stove, the process of acquiring firewood is described as exhausting. Two of these do not have a car and, thus, must carry sacs of firewood themselves. One of them, a 28-year-old woman, rarely heats with firewood because of these

impracticalities. Notably, she is also the only interviewee with a fire stove who does not receive firewood from Operation Firewood. She must carry 15 kg sacs of firewood over a 15-minute walk from the supermarket to acquire the fuels. However, she refrains from doing it as it makes her appear indigent or desperate:

> Female 28 I've only carried it once, men after that I said fuck it. It looked so damned sad [laughs].

The older interviewees have easier means of acquiring firewood. Notably, they all receive free firewood from Operation Firewood (excluding the 33-year-old man who does not have a fire stove). Additionally, a few have a car at their disposal, and many have family and neighbors who transport and carry the firewood for them – some of which receive significant firewood for free from their social network. The costs of heating with firewood was generally not a prominent topic in the interviews, perhaps because most of the households with a fire stove receive some or significant amounts of firewood for free. However, a 46-year-old man living with his wife and three children said that he spent 150 EUR a month on wood briquettes. Additionally, some of the older interviewees mentioned that they would not heat with firewood if they did not receive it for free from Operation Firewood.

The flexibility of having a fire stove (multiple heating sources, storing cheaper firewood, access to free firewood) makes it significantly easier to maintain an adequate indoor temperature at an affordable cost. However, this is less the case for the younger interviewees who have little access to free firewood or practical means of transporting it. In the case of the pensioners, having a fire stove and greater access to transport and free firewood appear to be significant advantages – perhaps even more so than their comparatively energy efficient dwellings. This is supported by the fact that most of the interviewees with a fire stove describe heating with firewood as crucial for maintaining an adequate indoor temperature at an affordable cost.

We have now seen that most interviewees struggle with maintaining an adequate temperature at an affordable cost and that some endure cold temperatures in the home no matter how they use the technology or how high the electricity bill is. In the next section, we will go into detail about how difficult it is for the interviewees to understand and predict energy costs.

6.2 Knowing one's energy costs

Understanding and predicting energy costs can give more room to maneuver and more time to plan and prepare for higher costs. However, the interviewees find it difficult to apprehend even approximately the costs associated to using energy services. There are at least two reasons for this. First, when electricity prices fluctuate on a daily or weekly basis, it is difficult to understand the affordability of using energy services beyond simple categories such as "winters are expensive" and "summers are cheaper". Second, winters vary in temperature and length, making it difficult to predict how much heating is necessary to stay comfortable long-term. As already mentioned in this chapter, these two factors are interlinked since rising electricity prices tend to co-occur with increasing need for heating services during the winter. These seasonal tendencies are sources of great insecurity and financial stress:

Female 58	It's sad. We're so dependent on electricity here in Norway, the rough climate we have and all that, it shouldn't be like that. It shouldn't be so that some have to freeze. We have to light candle lights.
Male 48	I'm afraid of electricity prices will remain high and the winter will be tough. What do I do then? What do I do? That's what I'm thinking about these days.

From the perspective of the energy users, the energy services they use (or limit using) remain largely the same. They are the same switches, lamps, radiators, televisions, and electric stoves they use in the same dwelling every day. However, the price on the electricity price per unit may change from one day to the next without leaving any perceivable change in the home. The price of using energy services is not clearly visible as it is being used. As a result, many have experienced that their efforts at reducing energy costs to remain one step ahead are rendered futile by rising electricity prices – not unlike Sisyphus rolling the boulder up the hill only for it

Female 43	No matter what I do, the prices still vary. So if I make an effort to get the electricity consumption down, the prices may still go up. So it's like, I feel that my efforts are nulled out [*vinninga går opp i spinninga*] so then I stop.

Three younger interviewees have a particularly hard time understanding and predicting energy costs. They suspect that they are paying for a share of their neighbors' electricity consumption. Typically, their suspicion arises after having lived in the apartments for a while and noticing multiple hot water tanks in their dwelling and that the neighbors' electric wiring run into their own apartment. In some cases, the interviewees have eventually succeeded convincing the landlord to partially fix such issues, but the interviewees suspect that such problems continue to occur. This would make predicting energy costs even harder. In the case

of a 36-year-old man living alone, he suspects he might be paying the electricity of several households:

> Male 36 If I'm paying for him (the landlord) and potentially that guy there (a neighbor), then I'm paying a fucking lot in electricity. I think its fucking expensive and she who lives at the other side down there (another neighbor), they are four people, they didn't have bills as high. Then I'm wondering, what is wrong here?

The interviewees perceive little feedback on their electricity consumption beyond the monthly electricity bill – when it is time to pay and too late for making additional adjustments. Consequently, the interviewees frequently experience unexpectedly high electricity:

> Female 44 [In January] we suddenly got a bill at 300 euro and the month before in December it had been 170 euro.

Changes in how electricity is billed in the past three decades have made it more difficult to understand what they are paying for. One example mentioned in the interviewees are the introduction of grid tariffs, initially billed separately but now billed as a part of the electricity bill. Another example mentioned is electricity bills previously being billed every third month and currently being billed every month. The interviewees report that such changes make it difficult to predict the size of the bill, understand what one is paying for, who receives the payment as well as separating old bills from new bills. A 28-year-old woman has discovered that she has paid the same bills several times:

> Female 28 You used to get bills from both the electricity supplier and the grid company, but now I feel like the bills are higher, plus I've experienced that they've sent the same bill several times and I've paid them all. I've had to call them and just *Hi, you've billed me several times, it's not correct.*

With little feedback and modest consumption, many interviewees seek alternative ways of getting more control. This often involves using tools or acquiring knowledge that they can use to stay one step ahead, such as asking the electricity provider what it costs to run the laundry machine and following the weather forecast or reading news about changes in electricity prices. Some have also tried to use apps provided by the electricity supplier to oversee their consumption levels. The utility of such apps is primarily linked to understanding that heating services are the most energy intensive domestic energy service. However, the interviewees do not perceive such knowledge as considerably useful having already exhausted their potential for cutting energy costs:

> Question: Do you use the app from the electricity supplier often?

Female 38	No… For me it's irrelevant to use it, cause I can't not heat my apartment, and I can't not make coffee, not have a fridge, you know, it just doesn't work … sure, it is useful to go in and look every now and then, but not to use it often because I must heat my apartment. It doesn't help to know when I'm using the most electricity because if I'm using more electricity more at 4 o'clock on a Thursday, it's because I need it.

However, being more knowledgeable might give a feeling of control. A 27-year-old man who had several habits of controlling if mold was developing and whether the neighbor was heating, explained that he manually logged the monthly kilowatt/hours consumed in a notebook. However, he admitted that doing so served no function. Having acquired more experience and knowledge about the costs of consuming energy in the apartment, he said that he had become mentally prepared for difficult winters, although not having more capacity to cope:

Question:	What's your thoughts on the winter approaching
Male 27	I imagine [the bill] will continue to crawl upwards. I'm also a little more prepared for it. We can't afford to save anything, but know it's going to increase at least and we know ca. what it's going to land at.

When prices are hard to predict and feedback on consumption is rare, it can be helpful to understand exactly what it is that one is paying for in using energy services. However, interviewees find this difficult due to the unperceivable and intangible nature of the product the interviewees are consuming: kilowatt-hours. This topic was brought up by several interviewees. They expressed having little understanding of what a kWh is, making it difficult to understand, for example, which electricity subscriptions are the cheapest. When asked about what consumes the most energy in the home, a 46-year-old man eventually expressed confusion about whether it is cheaper to pay a spot price or fixed price contract for electricity:

Male 46	I don't know what's best, for me personally, it's so hard to make a plan for electricity use, because the prices change during the day. You have so many months to take into consideration, kilowatt-hours doesn't tell me much. It's easier to relate to a kilo of a think or a liter of something, right.

The difficulty grasping kWh further leads to confusion about how to use technology in energy efficient ways. For example, interviewees find it difficult to understand what technology consumes the most energy, whether it is cheaper to consume electricity during the night, whether one should keep some heat on during the night or heat intensively during the morning and whether is cheaper to heat with firewood or electricity. A 38-year-old woman tried to explain how she used an electric radiator in the most cost-efficient way. The radiator has two settings with three levels each, one to determine the amount of watt used (750w, 1500w and

2000w) and another setting to determine the temperature (low, medium and high). She explained that she would set the radiator high heat and the lowest watt (750w) assuming it would produce more heat using the least kilowatt-hours (She had never used the settings for 1500w and 2000w before). However, while explaining, she realized that she had no idea what the best combination of setting was:

> Female 38 If I set it to 2000 watt low, then it will obviously use more than if I set it to high 1500 or? I don't understand these things.

Some interviewees mention eco-labeling as a sensible indication of energy efficiency. However, very few interviewees had invested in new, energy efficient technology. In contrast, most used old, broken, cheap or energy inefficient technology often acquired second hand. Those who had introduced new technology to the household expressed worry about energy costs going up. This was even observed where new and energy efficient technology replaced old technology. For example, a 58-year-old woman had recently experienced several electricity bills in a row that she could not manage by herself. In preparation for next winter, she had received infrared heating technology in exchange of being part of a commercial – technology that was supposed to efficiently heat the body and objects instead of heating the air in the dwelling. Although, the producer had told her that it was cost efficient to use, she explained that she used it carefully:

> Female 58 He said it should be saving electricity [*skal være strømbesparende*], but I'm scared to death that I will get another surprise bill [*sjokkregning*]

As she had not used the technology during the winter yet, she had not perceived the alleged cost-efficiency herself. In this case, becoming experienced in using technology seems to be more trustworthy than concepts such as eco-labeling or expert opinions. Furthermore, the fact that the producer had to install the technology three times following one small explosion and two product malfunctions, may have fed disbelief about the energy efficiency of the product.

Ambiguities linked to energy efficiency are not only linked to cost-efficient use of electric technology but also to achieving comfortable warmth with energy efficient fire stoves. The two oldest interviewees in the sample had invested in new energy efficient fire stoves. However, they discovered that it was difficult to use the fire stoves in the way they wanted. The fire stoves they had previously used spread the heat into the materials of the stove and chimney, heating during the night and leaving embers to continue heating in the morning. The new stoves were described as burning too quickly for the heat to settle in the dwelling, consequently requiring more effort on their part to heat continuously:

Female 98 I gotta heat forever before the oven gets warm and then it disappears quickly again, so I've got some problems with about what I should do.

Four interviewees were not concerned with predicting or knowing energy costs, primarily being concerned with maintaining a comfortable indoor temperature. Three of them received significant firewood for free from their family members, one of which paid her son – who also is her landlord – a stable price of 150 EUR a month for electricity. The last, a 33-year-old man, splits energy costs with two roommates.

Acquiring knowledge about efficient energy use is difficult due to the intangible and technical nature of kilowatt-hours and technology. However, being more knowledgeable and experienced can give a sense of having more control. In the next section, we will see that fluctuating energy prices and difficulties knowing energy costs are linked to suspicions regarding the reliability of the energy market and electricity suppliers.

6.3 Trusting electricity companies?

We have seen that most interviewees are struggling to heat adequately at an affordable price. Furthermore, they find it difficult to predict and understand energy costs. Consequently, many feel disempowered. Many perceive themselves to be marginalized as consumers of a product that is sold at an international and industrial energy market infinitely larger than themselves. There are large macro-economic processes and international legislation that shape the international energy market, something most interviewees do not trust will benefit them. Interviewees frequently mention cheap electricity being exported to other countries and expensive electricity being imported back to the benefit of the power companies, while Norwegian consumers pay the cost:

Female 79 I guess it's the state that makes money by… or no it's these electricity suppliers who's making money sending it abroad. Before there used to be state owned companies, but now there are private who's doing it and they must earn money. Maybe they felt that they're not earning enough by only selling it here.

The interviewees read about market mechanisms that determine electricity prices in the news. Sometimes, they find statements promising lower electricity prices, for example following rainy summers. However, such statements are often contradicted by what interviewees experience themselves:

Female 38 But damn it, the summers it rains a lot, the prices are not lower during the winter either. So for me, a man in the street [*hverdagsmenneske*], I see no difference. I only hear them say it, but I don't notice it.

They perceive the market and electricity suppliers as having the influence over their energy costs. It is they who determine the electricity price and conditions of electricity subscriptions. Finding the best deal is perceived as a chaotic and opaque process involving navigating among a wide array of seemingly good deals presented by convincing salesmen that approach them in the street or by phone to "push" the interviewees to change suppliers. However, while the salesmen may promise cheap offers, the deals rarely differ substantially in reality:

Female 69 Everybody is saying they've got better prices, but they're all operating in a spot price market so I can't understand that they have any choice. The difference is of course how much extra they bill you for … different added fees and stuff.

Instead of competing with cheaper prices, electricity suppliers compete by including other products such as subscriptions for TV, internet or mobile in subscription plans.

Male 36 It doesn't matter to me if they have TV or internet or telephone included. I want the cheapest electricity. That's all I care about, I don't give a shit if they can combine the bill with this and that.

Many do not trust that electricity suppliers can deliver more affordable energy. They are suspicious of seemingly good deals and concerned that they are catchpenny offers that will become expensive behind their back. Therefore, they feel that they must know every detail before taking on an offer to be sure that they will benefit from it. However, very few interviewees have benefited from changing electricity supplier. Rather, most complain that changing a supplier led to complications and stress. Beyond higher bills due to catchpenny offers, some have also experienced loss of the electricity supply as well as electricity suppliers not claiming payment:

Female 44 I have Hafslund. And I tried changing and then I got stressed because they never billed me. I reminded them several times [*purra og purra*] and they said that they would bill me, but it never happened. And then I got really scared of getting a huge bill, so I said that this is untenable. So then I changed back to Hafslund and said *I don't want you* (to the other supplier). It was after four months and they still hadn't billed me once.

In a handful of cases, interviewees have experienced substantial electricity costs that come on top of the regular monthly billing. These bills are often exceptionally high – up to more than 2000 EUR – and have numerous causes. Sometimes they are backlog bills that arrive after a period where interviewees were too ill to report their monthly consumption levels or follow a period in which the electricity suppliers stopped claiming payment. When such problems

occur, the interviewees do not find the electricity suppliers are willing to inform why they are being billed or help them pay such surprises. A 47-year-old woman living with her chronically ill husband and two children initially thought paying 250-300 EUR per month was a lot given that they did not have many appliances. After having sold their house with significant loss, they suddenly received a backlog expense of 2300 EUR in addition to what she had paid every month:

> Female 47 — I was shocked and called to argue with them, but I felt that I wasn't getting anywhere. My point was that we didn't have a dishwasher and we had a shared laundry in the basement. Eventually it ended with my saying *fine, I can't take this.*

A 69-year-old woman was billed 800-900 EUR following seven months during which the electricity supplier had not claimed payment for electricity. She felt that she had to suffer due to the faults of the supplier:

> Female 69 — There were no reasons for not billing me because I had a direct debit payment. In other words, it wasn't like I wasn't paying the bills. They had every opportunity to go in and just take it.

When she asked the supplier what had happened, she was told the problem had occurred in what they called "a European energy hub" – something she had never heard of, making her feel even more powerless. However, she wanted to verify that what she was being billed for and discovered that records from the grid company and the electricity supplier for her consumption did not match. She claimed she had been forced to pay too much and at the time of the interview, she was trying to get reimbursed. However, she was careful not to change electricity supplier before the case was settled, hoping her status as a customer provided her with more power.

The interviewees were asked if they would consider having an electricity subscription where prices varied according to changes in demand throughout the day. To explain the effect of this kind of subscription I gave the example that electricity would be most expensive during the evening when "everyone" is home and cheapest at night when "everyone" is asleep[16]. A few interviewees thought that the electricity prices already worked that way, associating the question with electricity market dynamics. Overall, the responses reflect the negative experiences and distrust the interviewees have for suppliers and companies within the

[16] The context for asking the question was that at the time of conducting the interviews, the Norwegian Water Resources and Energy Directorate was preparing a new regulation for the introduction of a new pricing structure for grid services (transport of electricity) in Norway, often referred to as capacity pricing in English.

electricity market. Few interviewees thought they would benefit from such a deal, perceiving little leeway for adapting beyond running the dishwasher and laundry machine at night. However, some questioned incentivizing such practices in case of machines breaking down, causing fires or water leakages something several interviewees had experienced before. Additionally, some reacted with shock and anger when I said that this was about to be tested in near future:

> Female 70 With anger, I don't like that kind of manipulation by electricity suppliers. But it wouldn't have changed my life situation any, because I wouldn't have used more or less electricity.

The negative experiences and perceptions of the electricity suppliers and the market do not differ among the two groups. However, three interviewees differ from the rest in that they are not customers with an electricity subscription provided by an electricity supplier. In one case, this is to the benefit of a 79-year-old woman. She lives in an apartment in a quadruplex owned and occupied by her son. She rents from her son which she also compensates for electricity consumption (150 EUR a month). She is, thus, not concerned with fluctuating prices. Being the only interviewee who pays a fixed price for electricity a month, having a fire stove and one of the better insulated apartments in the sample, she is in a comparatively fortunate position. Consequently, she is one of the few interviewees who can heat the apartment comfortably and is not very concerned with energy costs.

Two households pay their landlord for electricity every month. In the case of the couple participating in the study, a 27-year-old man and 29-year-old woman, their landlord is a middleman with respect to electricity. He has set up an electricity plan in his own name and transmits the electricity bill to the interviewees on a given date every month. According to this informal agreement, it is the landlord that has most of the information about their energy consumption, access to the app provided by the supplier as well the deciding power to change supplier. However, as the landlord is responsible for the electricity subscription, the couple has the potential advantage of avoiding a bad payment record if the electricity bill is not paid on time (although that might put a stain on the relationship with the landlord). The 36-year-old man who has been living on the street and suspects he is paying for a share of his neighbors' electricity consumption has a similar oral agreement with his landlord – which he compensates for electricity consumption. In short, the interviewee calculates his own monthly electricity bill in the following way: the landlord sends him a photo of the electric meter indicating the kWh the interviewee allegedly has consumed in a month – a photo that could be

altered or dated. The interviewee must then find a suitable electricity price per unit at a website of a European power exchange:

Question:	How do you find the price?
Male 36	I have to look around a fucking lot. Markedsdata, Nord Pool, I go there.

Being unable to verify the kWh consumed, it is virtually impossible to verify that what he is paying for electricity is calculated correctly – including grid tariffs and fees. While, in theory, he could take advantage of the situation and choose a cheaper electricity price, he could risk complicating the already troubled relationship with his landlord.

6.4 Conclusions

Most interviewees struggle with heating their dwelling at an affordable cost during the winter. They feel they have little influence on the size of their energy bills. Rather, energy costs are dictated by their needs as caused by cold winters and rising electricity prices per unit. In combination with cold dwellings and lack of influence on energy efficiency measures in the building structures (as seen in chapter 5), their costs grow uncontrollably. With monthly electricity bills at up to 300 EUR a month (in rare cases up to 450 EUR), many spend up to 20% of their monthly income during the winter to service unexpected high energy costs.

The older interviewees are generally less vulnerable. Almost all have a fire stove and receive help in stocking up on cheap and free firewood. Consequently, they have less trouble affording energy and are typically more concerned with maintaining an adequate temperature than the costs of energy use. A few of them are content with the temperature they maintain in the home, while some are unable to heat their dwelling adequately despite disregarding costs and setting thermostats to maximum.

Understanding and predicting energy costs is difficult. The interviewees receive little feedback on their electricity consumption and, in their experience, any attempts to reduce energy costs may be rendered futile by rising electricity costs. This is perhaps more so the case for households who suspect they are paying for a share of their neighbors' consumption. The utility of knowledge on energy consumption is limited as many interviewees feel that they have already exhausted their potential for reducing energy costs: consequently, few interviewees mention investing in new energy efficient technology. Furthermore, the

technicalities of kWh are perceived to be a barrier to understanding efficient use of energy technology and electricity subscriptions. As a result, interviewees have little sense of control.

With low income, high costs and little sense of control, most interviewees feel that their influence as energy consumers are marginal in the context of the energy market. International market dynamics and electricity suppliers determine the electricity price and the available offers. The interviewees are suspicious of seemingly cheap offers that might involve unknown conditions. In their experiences, changing electricity suppliers more often lead to complications than benefits. Additionally, they do not feel that electricity suppliers are willing to help or that consumer complaints and inquiries lead anywhere. Based on such negative experiences, they have difficulty trusting the benefits of the coming tariff structure to motivate flexible energy use. What many interviewees express is that they have already exhausted the potential to minimize electricity consumption.

7 “Brace yourselves, Winter is coming”: Experiencing and coping with energy poverty

In the previous two chapters, we have seen that the interviewees struggle with various dimensions of energy poverty. Difficulties acquiring adequate housing and improving the energy efficiency of dwellings, leave many stuck renting poor condition dwellings that are difficult to heat. When winter comes, energy costs quickly rise as do electricity prices and the need for heating increases. In addition to high energy costs, many receive additional expenses from suppliers who they perceive as unwilling to help. Having small and unstable incomes, many are forced to freeze and empty their pockets to get through the winter. Having little sense of control over these factors, many interviewees struggle with maintaining an adequate temperature at an affordable cost. Consequently, they are left to try to stay warm and make ends meet as best as they can. However, the two groups are not identical in these respects, the younger group being the most vulnerable. As we shall see in this chapter, the two groups experience and cope in different ways with energy poverty. The chapter is divided into nine sections touching upon topics such as how the interviewees cope to stay warm, which household expenditures are cut, how their lifestyles change from season to season as well as the health and social implications of energy poverty. Notably, many interviewees experience being socially excluded from society and being unable to be a “normal” citizen.

7.1 Using energy to stay warm

Heating-related saving practices are the most common energy related coping strategies observed. Given that only 3 out of 18 interviewees have employment, most interviewees occupy the home during the day and are, thus, more exposed to lack of adequate warmth. With rising energy costs and heating needs during the winter, most interviewees avoid unnecessary costs and wasting heat by carefully optimizing the heat consumption. Living in energy inefficient dwellings, most prioritize heating only one or few rooms in the dwelling during the winter. Bedrooms are rarely heated, while living rooms are typically prioritized being the room they mostly occupy during the day. Additionally, those heating with firewood

typically have a fire stove in the living room. Consequently, only a smaller section of the house is heated and occupied, with the rest left unheated. For the heating regime to work efficiently, the warmer temperatures must be controlled by keeping doors shut. The interviewees do this consistently, as exemplified by a 48-year-old man asking guests to do the same:

Male 48	I have the lowest temperature possible in the bedroom, I try to keep that door closed. The hallway is always cold, so the people coming into my living room quickly get asked to close it or else I must get up and close it myself.

The heating produced in the only heated room must be contained to stay comfortable. Heating only a small section of the dwelling leads to considerable differences in indoor temperatures. When the interviews open doors to, for example, go to the bathroom or bedroom, they experience being hit by a rush of cold. The active engagement necessary to stay comfortably warm is experienced negatively:

Female 69	I don't like the system where I go and close doors all the time. I'm used to it, so I live with it. But I think it's tiring, I think winters are a little tiring.

Interviewees are careful to maximize the utility of heat already produced. When night comes, most interviewees turn off the heating to avoid wasting energy and cut costs. To benefit from the heated living room, some may open the bedroom door to from the living room to further utilize heat already produced. In an exceptional case, a 27-year-old man had been coping in such ways for so long that these strategies had become nearly automatic:

Male 27	I notice unconscious choices that I make. If I've cooked water, I was just cooking chicken, and then I let the casserole stay on the hot stove to give off extra heat. There are small things I'm doing all the time
Female 29	And when you open the oven, you let it stay open so that the heat comes out.
Male 27	It's free heat in a way.

Although most interviewees only heat one room, the regime of closing doors is rarely enough to stay comfortably warm. A 58-year-old female interviewee receiving social benefits, explained that she rarely set the thermostat to her preference of 23 degrees Celsius out of fright of higher costs. In colder periods, she must choose between paying for heating or covering up to stay warm:

Female 58	I have it set to 22.5 [degrees Celsius] now because it was so cold [*surt*] but then I end up turning it down and covering up instead.

Putting on warm clothes is a common strategy for coping with cold temperatures. The interviewees wear up to three layers of warm clothing such as wool socks and underwear, sweaters and pants. Additionally, they wear beanies, boots and fingerless mittens indoor. Covering up is not only necessary to make heating more affordable such as in the previous quote, for some it is necessary to stay comfortable in dwellings that are difficult to heat:

> Female 28 I always have my beanie with me, because during the evenings I'm freezing like hell, even if it's on full throttle [*full guffe*] and I close the doors it's pretty bad.

A handful of younger interviewees also cover up in blankets. They have blankets scattered throughout the dwelling or move around in the home while covered up. In exceptional cases, two precarious interviewees particularly vulnerable to cold temperatures due to chronic muscle illness use electric blankets to stay warm – effectively creating a smaller heated space for them within the heated living room. One of them, a 29-year-old woman who started using an electric blanket when she fell chronically ill during pregnancy, explained that she stays in the electric blanket most of the time:

> Female 29 I have [illness that causes chronic pain in muscles] so I need a little more warmth than him (her boyfriend, Male 27). So I live in the electric blanket and that costs a lot. I always have my electric blanket with me.

Many interviewees have been so desperate for affordable warmth that they have used untraditional heating sources. Examples are placing casseroles of boiling hot water throughout the apartment, burning construction wood/particle board, cardboard and inflammable trash in the fire stove, covering up under a blanket on the heated bathroom floor and using candle lights:

> Female 28 I buy a lot of candle lights, so when it will be 15 minus again, I'll just have to put candle lights everywhere and it warms a little bit – it does! … As I mentioned, I use a lot of candle lights when it's at its worst. The only solutions are, are to cut back on everything.

The great lengths many interviewees will go to cut costs and stay warm is tiring. It consumes mental energy and time that could be spent on doing more meaningful activities such as socializing or useful activities such as claiming social benefits. The coping strategies that they perform are experienced negatively:

> Male 27 It's tiring to be so conscious of it all the time that you think about and stress over a lightbulb to save a little electricity.

Female 44 I want a life as well, I don't want to sit and think about it. I have a lot of more exciting things to think about, that I must make sure to think about instead of this here.

Being constantly conscious of energy costs accumulating but having little capacity to cope, most interviewees see their well-being diminish during the winter.

Question: How were you that winter last year, or the one before that you said was tougher?

Female 28 Yeah, well I don't have any filter. Depressed, simple as that because I. Ehm, it affects your life quality in all areas. You feel that you can't turn on the lights because you know that during the winter months they'll crank up the prices like hell because people need electricity and they have no choice. It's always more expensive during the winter, even if you use less electricity. That's just the way it is.

We can thus conclude that the energy poverty experienced by these households does not merely concern lamps, radiators and other technology, the interviewees consume significant amounts of mental and physical energy in their attempts to achieve comfort at an affordable cost. On a final note, energy use is more than heating practices. The younger interviewees are particularly concerned with cutting energy costs wherever possible. Examples of such coping strategies given in the interviews are only running full laundry machines, letting electric ovens heat the dwelling after cooking, storing hot coffee in vacuum flasks and pulling out the cord and turning technology such as PCs, TVs and microwaves off to avoid energy consumption in stand-by mode. Additionally, many make sure to not use more light than what is practically necessary, such as only lighting occupied rooms and having one or a few lights on at a time. Several also watch TV or use their computers in the dark, while a few has acquired small lamps or USB light sources to provide some background lighting.

Female 28 I usually turn most things off when I'm not using it, I only use the working light and the PC most of the time.

Female 43 I don't use a lot of lamps compared to a lot of people. I like to have it dimly [*dunkelt*], because I don't like the sharp lightning … I never use floor lamps, because I don't like them [laughs].

Question: What's wrong with it?

Female 43 It's such a terrible light, it looks like I live at an institution when I have it on.

7.2 Health implications of energy poverty

Living in uncomfortably cold apartments leads to deteriorating physical health during the winter. About half of the sample are particularly vulnerable to cold temperatures due to chronic illnesses or aging. The retired interviewees talked about freezing more easily as they age, explaining that the body produces less heat and become less active. Consequently, many experience cold-induced cramps and suffer from arthritis. Notably, the 98-year-old woman freezes constantly despite having the highest electricity costs in the study (300-450 EUR per month during the winter), having thermostats set to 30 degrees Celsius and heating with firewood:

> Female 98 It's so painful, I'll feel so much pain that I'll scream into the night by myself.

Being susceptible to freezing, the chronically ill and oldest interviewees have greater heating needs. They risk becoming ill or experiencing pain resulting from inadequate heating. Consequently, they have lower capacity to withstand inadequate temperatures. Notably, three interviewees suffering from a chronic muscle disease perceive coping with cold temperatures to be difficult and painful:

> Female 58 Most people say that they just cover up when they get cold, but I get ill, I get flue-like symptoms in my body. And then I begin to ache, yes, you get terribly tired if you have to spend time in pain. So winters are tough, it would've been better if it was better in here.

Not only do these interviewees get sick and endure considerable pain when they freeze, it also prevents them from working, taking care of children, and carrying out priorities. It makes them dependent on the help of others. A 47-year-old woman working nearly 140% to provide for her chronically ill husband and two children, explained that she must juggle chores and work to get through the day when her husband becomes sick:

> Female 47 He's got a weak immune system. It takes much more time for him to get well than for me and you- Everything takes more time when he's ill. When he's ill, a lot depends on us, he can't do the things he should do, follow the kids to activities. And then I have to change shifts at work to make things work out.

7.3 Shame and social implications of energy poverty

The strategies we have seen for cutting energy costs and staying warm may have different social implications. Facing high energy costs, some see no other alternative than isolating themselves. This is illustrated by a 58-year-old woman who had recently endured a particularly difficult winter with a temperature of 15 degrees indoor. When she was billed

nearly 300 EUR in electricity, she saw no other option than turning off lights and heating and spending evenings in bed with her PC all winter long to cut costs:

Female 58	The neighbors were wondering, you know. It was so dark in here [laughs]. It was so dark during the evening, I had to go up (to the bedroom) … People said *oh my, what's going on with you, it's so dark at 18 o'clock*. I said, *yes, then I go up because I can't afford heating*. I was completely open about that … Yes we (the interviewee and her dog) did go under the duvet to stay warm, wore blankets under the duvet, those electric blankets. Then I watched films.

Having to follow a regime to stay comfortably warm in only a section of the dwelling, a handful of interviewees perceive the dwelling as uninviting and unwelcoming. They find it difficult to have visitors over during the winter. Some are ashamed of living in cold and dark dwellings unsuitable for having guests. In the case of a 28-year-old woman, she was ashamed of herself when guests had to endure the cold dwelling because of her rationing:

Question:	What do you feel then?
Female 28	Ashamed, as simple as that. It sounds very dramatic, but you're a little ashamed of yourself. You don't want people to come in and freeze or that it's completely dark, just because you have to turn everything off.

These interviewees do not take for granted that guests will be at ease with wearing several layers of clothing and blankets to stay comfortable. A 69-year-old woman explained that guests were often unprepared for how cold her apartment was, even when she had told them about it beforehand. Having guests over, thus, leads to stress:

Female 69	I don't think it's nice to have guests during the winter because it's too cold. It's very problematic … I try to avoid it. It's difficult to maintain a comfortable temperature when people come over who are not prepared for it … I get too stressed by it, I don't like that people think it's too cold or can't get comfortable and stuff.

They perceive their coping strategies as contrary to prevalent norms and experience that people do not understand them. Consequently, many interviewees feel that it is difficult to be open about their situation:

Female 28	It's basically embarrassing, I think it's embarrassing to talk about now, to admit that electricity prices and turning on the heat can be too bad because one doesn't have money for it. It's like a problem you think that most people don't have.

However, negative emotions such as shame and embarrassment are not only consequences of acting contrary to prevalent norms in coping with energy poverty. These emotions also lead interviewees to aspire to heat according to what they perceive as guests' expectations of comfort. Consequently, interviewees must choose between paying the energy costs to

socialize or remain alone to lower energy costs. This leads some to isolate themselves during the winter, only having close family members over:

> Female 58 It's clear that I can't invite people over when it's so cold. When I had my grandchild over, I had to heat. It's clear that I must do so.

7.4 Searching for additional income

While temperatures can continue to drop and electricity expenses may rise unexpectedly, more rationing of energy use during the winter months risks deteriorating the interviewees wellbeing and health even further. Consequently, many are forced find additional ways to scrape by when energy costs increase. In these respects, the three employed interviewees are in a more flexible situation than most others, potentially being able to work more in times of financial constraints (see Chapter 4). The 15 remaining interviewees who depend on pensions or social benefits cannot acquire additional capital as easily, so when energy costs increase, they must use the resources and competences at their disposal to scrape by. Examples of such are selling their TV and other belongings online, organize meetings in the home to sell TupperWare to acquaintances, rent out an unused garage, do freelance journalism as well as cash-in-hand jobs such as painting houses and helping elders. Some also initiate projects that might reap benefits in the long-term. This is illustrated by the wife of a 46-year-old interviewee who migrated to Norway a few years ago from South America. Since moving to Norway, she has had a hard time finding a job. Recently, she has started selling homemade meals from her home country at fairs. However, the gains from selling food would barely cover the costs of the ingredients and the booth at the fair. Her husband explained that she, being a housewife, did it to become more independent:

> Male 46 We've been doing it for some weeks to try to get a little more income, so her daily life doesn't look so fucking much like slavery, you know, just being here in the house, taking care of the kids and cooking … But yes, we do it as a long term project and maybe one day it will pay off, but either way it's important that my wife can stand on her own feet or get out and do things. She is a pretty active woman who has had a hard time coming to Norway to just sit in the home.

7.5 Support from social network and strangers

Many also draw on their social network to get by. Several receive financial support in the form of loans or donations for paying bills, deposits or social activities. The younger often perceive this as crucial for getting by:

> Female 28 I've been really lucky to have good friends of mine that help me with projects, that I can borrow money from and that we support each other. But if you don't have a network and that sort of things, it is really really difficult to live in Fredrikstad.

Drawing on one's social network is sometimes necessary to be able to continue participating in spare time activities:

> Question: Does living in a cold apartment have any consequences for you and your daughter, for your health or wellbeing?
>
> Female 44 No, I've prioritized to keep it warm for her sake. The only thing is that it prevents us from doing other things, and now I've had a grandmother who's contributed with paying the spare time activities of my daughter, without that [my daughter] cold not have done that … But as I've said, I've had family members who have made us feel like we aren't poor.

The older interviewees typically have a stronger social network to draw on. The support they receive is not so much directly linked to paying energy bills as reducing housing and living costs. Most have raised children and created a family who are supportive in providing them with free firewood and radiators, shopping groceries for them, fixing deficiencies in the dwelling and doing their laundry. As mentioned in Chapter 4, two also have a comparatively stable housing situation renting from their children. Additionally, several have family members working within economy and welfare who help them with their personal finances, for example in calculating expenses and their pension. However, while the pensioners expressed no concerns receiving support, many young interviewees feel unworthy of having to depend on – typically – parents. A 38 years-old woman explained that, although receiving financial support from her parents, high electricity costs forced her to skip weekend activities with sports and music groups as well as reduce food costs:

> Female 38 I'm 40 years old and I want to be a normal person. And then with a food budget way below what normal people probably spends, so it works out [*går opp i opp*] during the summer, but not during the winter. So how do I make it work during the winter? By receiving help from my parents who are not going to live forever … So it affects my daily life by making me dependent on others to have a normal life. If they hadn't been there, I'd probably have to cut spare time activities half a year at a time.

In two exceptional cases, young interviewees have received up to 1200 EUR in donations from strangers in difficult times. When the 58-year-old woman who had spent most of her

time in bed to cut energy costs opened about her situation in a newspaper, she suddenly received donations from strangers:

> Female 58 — Then people started sending [*vippse*], 20, 40, a guy sent 150, up to 1000 euro in total. If not even more 1000-1200. In the end I said no … I could've kept receiving for a long time, but I felt it wasn't right because I had gotten so much that I got by.

7.6 Cutting down on food consumption

Many younger interviewees have become apt at economizing after years of living with low incomes. When winters come, many interviewees look for ways to minimize expenses. They reduce costs by purchasing low-end products such as food and toilet paper, acquire needed furniture and household items secondhand for free and visit family members over dinner. However, the financial constraints they endure force them choose and prioritize between expenses that are strictly necessary or not. When energy costs are high, many will refrain from buying clothes, getting a haircut or stop participating in social activities such as going out and meeting friends. For many, this is necessary to scrape by. When asked if she had ever had a power cut due to unpaid bills, a 58-year-old woman said:

> Female 58 — I have kinda always gotten by, but that's because you cut back on absolutely everything, everything you can imagine that you can cut back on, you cut back on. Everything from drinking less soda, not buying so nice food, only having one sort of spread [*pålegg*] instead of two. You know, avoid getting a haircut. You cut back [*knipe inn*] on absolutely everything you can, because you don't have a choice.

Frequently, the young interviewees must cut food costs to cope with high electricity bills. While feedback on electricity costs is mostly limited to the monthly bill, food costs are more manageable. It is easier to perceive and control food costs when going to the supermarket – often several times a week. In other words, the interviewees can initiate saving practices as immediate responses to high electricity bills. They perform new practices and acquire new competences to make their current diet cheaper such as making food from scratch, dumpster diving and bulking up on groceries from a cheap supermarket across town – or in Sweden. Interviewees also change their diet to cope. Some eat little meat, buy lower quality produce, stop eating snacks and drinking alcohol or eat the same cheap meal every day to afford paying the energy bills:

Male 36	The people like me who sit in here and freeze, feeling that it's cold, having to eat porridge nearly every day because that's all I have money for. It shouldn't be like that.

The interviewee cited above, a former opioid addict, even used his competences in cultivating marijuana to begin cultivating herbs and vegetables in his landlord's garden – competences he had acquired after living years on the street. He was hoping that it would provide him with some financial independence in the long run:

Male 36	Green onion and other things – to keep myself floating a little bit because there are so many holes in the boat [*det glipper så mye i systemet*]. Suddenly, there's something wrong, then there's something wrong, then there's something wrong.

In the most exceptional cases, two interviewees have been forced to ask for free food from humanitarian organizations to get through difficult times. Consequently, a 28-year-old woman felt unworthy and dependent on others to subsist, alluding she had descended to a lower level in a social hierarchy:

Female 28	I never thought that I would end up in that situation, having to ask for help to have food.

These examples illustrate how high energy costs have consequences beyond merely consuming energy.

7.7 Habituated to modesty

The older are rarely forced to reduce expenses beyond those related to heating. That does not imply that they spend their means comfortably without considering which expenses are necessary or not. Rather, they appear to be already habituated to a modest lifestyle after years of limited financial means. Most spend their days in the home with limited socializing and relatively low living costs – excluding energy costs. Some interviewees have had a modest upbringing and been taught to live according to what they can afford. When talking about her past, a 72-year-old woman, said that she did not prioritize "silly" expenses such as going to the restaurant when energy costs are high:

Female 72	I've learnt, we are eight siblings and have never been rich or had comfortable finances [*god råd*], I've learned to live according to my means [*å ta tæring etter næring*]. When you're not a millionaire, you're used to that. Prioritizing.
Question:	What do you let go off?

Female 72 I might let go to travelling or silly things, clothes, go out and eat dinner at a restaurant.

It seems that being thrifty and living modestly is internal to their habitus after living for years of limited financial means. This is also the case for the only employed interviewee in this group:

Male 33 But when I'm broken, I get creative. And I've been broke a lot in my life, so I'm quite skillful at living for free when I have to.

7.8 Longing for normality

As previous sections illustrate, high energy costs ultimately lead to wide ranging changes in the lifestyle of the younger interviewees. Not only do they cut back on energy use as electricity costs increase, they cut back on food costs, isolate themselves and depend on family support and to scrape by. In sum, their lifestyles fluctuate according to seasonal variations in energy costs.

Female 58 One thing is that my finances have made it like this, the other is that I can't work because I'm ill, but I could've been a part of society despite that. But if it's going to be like that during the colder six months [*vinterhalvåret*], with so high electricity bills that I have to isolate myself, I can't afford going to birthdays, I can't afford to celebrate Christmas. I can't afford this, I can't afford that.

However, the practices they must give up do not merely disappear from their consciousness but continue to exist as *entities* (Shove, Pantzar, and Watson 2012). As entities, these practices exist across time and space even when they are not performed by the interviewees. While the interviewees isolate themselves at home, "everyone else" continue to perform common practices such as going out and having an adequate diet. As such, the interviewees experience such practices as a part of what normality is. Asked about how high energy costs affects her daily life, a 38-year-old woman said:

Female 38 I buy less food. I can't afford to have a diet, also now during the summer, with my budget, I prioritize my spending to have a normal life, to be a normally functioning person just like everyone else. That means that I must pay for my spare time activities, I would like to go to a café and buy coffee, I want to eat out every now and then, buy make-up – live a normal life. I'm 40 years old and I'd like to be a normal person. And then with a food budget way below what normal people probably spends, it works out during the summer, but not during the winter.

Maintaining a satisfying diet or going out are not merely examples practices performed to nourish the body or have meaningful social relations. Performing such practices are what

being "normal" *is*. Normality as such is an internalized ideal that defines whether they are "normal" citizens or not. Feeling excluded socially, many strive to "perform normality" despite their material deprivation, resulting in a tug-of-war between satisfying basic, material needs and the need to be "normal" that lasts throughout the colder seasons. Although not affording to perform normality during the winter, the woman in the previous quote said she refused to let go of her preferred lifestyle:

> Female 38 I'm clinging on to my lifestyle because it makes me feel good. I have the social activities I need to stay normal, basically.

Struggling to perform normality does not only make them feel different, deviant or "outside of the norm". Coping to scrape by – from living in cold and dark dwellings to self-isolation – are *distinctions* of their marginalized position in social hierarchies (Bourdieu 2002a). Many feel that they are a part of a socially dominated class in an unequal society. Notably, several interviewees evoke a myth of Norway being a rich and egalitarian society:

> Male 46 I think that we are a poor family [laughs] … I think of Norway as a class society just like the rest of the world, we live in a capitalist society and for me, a poor person is someone who struggles to satisfy his primary needs. Our living standard, compared to our neighbors, differs considerably. I'm working fulltime, but we only have one income in the home.

Linked to this myth is a conception of socio-economically marginalized people being responsible for their own misery, echoing findings by Gubrium (2015a) seen in Chapter 1. The interviewees experience that people assume that the Norwegian welfare state will take care of their problems and that they suffer because they have not asked for help. Additionally, interviewees receiving social benefits feel perceived as too lazy to work. Consequently, the interviewees find it difficult to be open about their situation out of fright of being perceived as complaining or crying for pity:

> Male 46 In the Norwegian society, those who struggle are held responsible – *it's your fault! We live in a perfect society, walk around and look at global statistics and we're topping most of them*. So you're not allowed in Norway to not feel good, if you're among the 80% that's somewhat comfortable, you'll be considered a freak [*monster*]. I think that sticks deep in the subconsciousness of the Norwegian soul [*folkesjela*].

Several interviewees contrast this myth with a perception of marginalized Norwegians having to carry a great weight of fees:

Male 36 We're in Norway, we're in one of the richest countries and we have so many taxes and we have so many fees, and it's at the expense of those who have the least.

Several interviewees feel that people are unable to understand the precarious situation they are in and how they suffer. Instead of being understood, they feel stigmatized:

Female 58 It would be nice to talk to someone who says *darn, it's going to be rough, how are you going to solve that?*, you know, talk to someone about the daily challenges we have. I feel like there's stigmatization, then you feel excluded.

7.9 Conclusions

We have seen that high energy costs have wide ranging impacts on the life and well-being of interviewees, who have little capacity to manage with high energy costs and cold winters beyond coping and cutting costs where necessary. To stay warm, many adopt a regime of coping strategies to optimize the utility of heat and warmth, strategies that sometimes have been performed for so long that they have become automatic. However, many find it fatiguing to constantly be conscious of and ration on energy use. Many interviewees who have a reduced capacity to withstand cold temperatures due to aging and chronic illness see their health deteriorate during the winter. Furthermore, the cold dwellings and high energy costs can be so severe that people isolate themselves in the home. They go to bed to cut heating costs and avoid having guests because they feel that they cannot meet the norms for heating or because they are embarrassed of having to cope.

Many interviewees depend on their social network, personal resources, and competences to get by. Notably, the elders receive help in reducing housing and living costs from their children and family. They appear to have settled with living a modest lifestyle and are primarily concerned with heating adequately. The younger, however, feel that energy costs may grow uncontrollably and must depend on their parents to maintain a "normal" lifestyle and diet. Being desperate to cut costs, many younger interviewees resort to eating less and worse as well as giving up "pleasures" that are not strictly necessary expenses. In the most exceptional cases, interviewees have scraped by through receiving significant financial donations from strangers and free food from humanitarian organizations. Consequently, the younger interviewees experience that their lifestyle is dictated by seasonal changes, resulting in a tug of war between cutting costs to scrape by and being a "normal" citizen. On top of this, they carry the emotional burden of being stigmatized and held responsible for their own

misery, living in one of the world's wealthiest countries. These interviewees find it difficult to be open about their struggles and to be understood.

8 Locked in fields of power: An analysis of the findings

The purpose of this thesis is to explore how vulnerable households in Norway experience and cope with energy poverty in their daily lives. How much leeway do they have to cope and how is their wellbeing affected? We have seen in the three previous chapters that the interviewees have little perceived agency to influence their situation. Because of this perceived lack of agency, the interviewees are energy vulnerable and for many, "cold weather shocks are equivalent to income shocks" that plunge them into energy poverty (Beatty, Blow, and Crossley 2011, 1). This is partially due to the low incomes of all interviewees. However, the younger interviewees tend to have unstable incomes mostly depending on social benefits. Furthermore, the interviewees tend to rent energy inefficient dwellings, while elders have acquired better accommodation or improved energy efficiency with help from family. With low incomes and energy inefficient dwellings, many interviewees experience substantially high energy costs during the winter and endure significant cold temperatures at home. The interviewees find it difficult to understand and predict the size of the electricity bill due to little feedback and the technical nature inherent to electricity use. Furthermore, they are unable to find better electricity subscriptions on the market that would provide more leeway. In contrast, electricity suppliers are more often linked to complications and additional bills than benefits. With little agency to improve their situation, many interviewees are forced to ration on heating and freeze during the winter. The younger interviewees are particularly vulnerable having to cut living costs and give up pleasures related to food and social activities. Consequently, the living standards of many interviewees swing like a pendulum between summer and winter. This constant disempowerment fosters various forms of dependencies to get by as well as manage particularly difficult periods.

From an analytical perspective (Shove, Pantzar, and Watson 2012), we may regard agency as distributed among actors, objects, and elements of practices that prevent the households from improving their situation. Examples are the welfare bureaucracy, materiality of the dwelling and normative expectations of adequate energy use. As such, the interviewees are stuck in a situation where heating adequately at an affordable cost is difficult. Middlemiss and Gillard argues that the lack of agency of households living in energy poverty "is connected to a series

of concurrent institutions" such as the welfare system, housing stock and market, as well as the energy market (Middlemiss and Gillard 2015, 152). They write that these institutions and markets may address issues relating to energy poverty but "individual households are not benefiting from these measures and in fact are often constrained by them" (Middlemiss and Gillard 2015, 152). Housing allowance is an example from the findings that echoes this. Following the argument of Middlemiss and Gillards, I will draw on the theoretical framework presented in Chapter 3 to analyze how the interviewees perceived lack of agency and experience of negative feelings are linked to inhabiting unprivileged social positions in various fields of power related to the welfare bureaucracy, making a career, the pricing of electricity and the family.

8.1 Exclusion from financial independence

Income is a central cause of energy poverty as shown in the Chapter 2.3. Depending on pension, social benefits or low-end jobs, most interviewees cannot expect significant income increases in the future. In a study in the UK, it was argued that energy poor households with "limited employment opportunities … have limited power to control income" (Middlemiss and Gillard 2015, 152). We can interpret the disempowerment of several interviewees in light of their position within (or outside of) the *field of careers* (Iellatchitch, Mayrhofer, and Meyer 2003). The field of careers is characterized by power relations between people with different career trajectories who struggle to acquire better positions and convert *career capital* (competences, resources and social capital relevant to a career) into an income (Iellatchitch, Mayrhofer, and Meyer 2003). This capital may or may not be considered relevant or legitimate as illustrated by the 46-year-old man who has migrated to Norway with his wife, but whose university education from their home country is not approved in Norway.

The field of careers is not simply a field among other fields, but a rather large inclusive field containing all employed individuals. After all, "[e]veryone engaging in some type of professional activity also has a career of some sort" (Iellatchitch, Mayrhofer, and Meyer 2003, 733). As such, the unemployed who have, in some cases, depended on temporary social benefits for decades have particularly little control over their own income. They are excluded from the field of careers, not because they lack the career capital to progress in a specific career, but because they do not have relevant or legitimate competences and resources to have a career at all. Thus, their goal is not so much "about reaching a favourable position" in the

field by having a specific career trajectory, but simply entering the field to have an income (Iellatchitch, Mayrhofer, and Meyer 2003, 733). Considering this, we can understand the stigma and the perceptions of being held responsible for their own misery or "too lazy" that the recipients of social benefits report. Being unemployed, they belong to a comparatively small group excluded from the large field of careers and its "productive" individuals transforming career capital "into human performance contributing to organizational production of goods and/or services" (Iellatchitch, Mayrhofer, and Meyer 2003, 735). They are not stigmatized because they have less prestigious employment than others, but because they do not have employment. In a study on stigma and welfare programs in the Nordic countries, 70% respondents indicated that there is stigma linked to receiving social benefits in Norway (Larsen 2016). However, stigma was seldom linked to receiving pension, echoing the pensioners in the present study who did not report feeling stigmatized even though many of them did not work full time before retiring. Larsen argues pensioners are not as stigmatized because "it is much more acceptable to become old than to become unemployed" (2016, 107). This is perhaps particularly true in older women in the present study who belong to a generation of women who were not expected or given the chance to have a proper career.

While the *size* of income is an important factor in determining energy poverty, Middlemiss and Gillars argue that "the *stability of household income* is a more dynamic conception of the relationship between income and fuel poverty" (2015, 152). In their study of primarily energy-poor recipients of social benefits and low-wage workers, the interviewees yearned for the autonomy and flexibility of a stable income. This echoes the financial situation of the younger interviewees of the present study, a factor that separates them from the elders. By virtue of being of working age and dominated in the field of career, their income largely depends on the welfare system – or their position in the bureaucratic field of policies and legislation for benefits. They rely on social benefits and, consequently, their financial situation rests on relatively unpredictable entitlements. However, social benefits do not only depend on being entitled to benefits, but also on having the necessary competences and knowledge to claim them, to endure months of waiting and to appeal declined applications if necessary. In an ethnographic study of welfare clients waiting for benefits in Argentina, Auyero claims that "[t]o be an actual or potential welfare recipient is to be subordinated to the will of others" (2011, 24). This subordination is determined by the procedures and formalities the social benefits applicants must follow as their case is processed, something Auyero describes as a bureaucratic doxa of: "show patience, wait, and you might obtain a benefit

from the state" (Auyero 2011, 23). This is illustrated by the great insecurity several individuals have gone through when applying for permanent disability benefit and being insecure about losing one's temporary AAP in semesterly work capability testing. As Auyero writes, "if the state really wants to include beneficiaries as active citizens … it does not make much sense to make them wait in this zone of uncertainty" (Auyero 2011, 25). When interviewees finally receive disability benefits, it might amount to winning "hollow victories" in cases where it leads to a disqualification from housing allowance. From these processes, the interviewees learn that they are in a position of poor-but-not-poor-enough. Falling between two stools, there is a discrepancy between the interviewees' perceived needs as vulnerable households and their "real" needs as defined by the welfare state.

8.2 The socio-materiality of housing

Dwellings are "sites of reproduction, transformation and innovation concerning energy resource use" (Petrova and Simcock 2019, 3). In the findings, we have seen that the interviewees' dwellings affect their energy practices, notably through the affordability of energy services. There is agency built into the materiality of the interviewees' dwellings as exemplified by the energy inefficiency of drafts, poor insulation, and few neighbors. The colder and more inefficient the dwelling, the more difficult it is for the interviewees to control heat and impact the cost intensity of heating practices. This echoes the tendency of energy-poor households to inhabit energy-inefficient dwellings, as seen in Chapter 2.3. Specifically, the link between tenancy and energy-inefficient dwellings has been observed in the present study (Willand, Maller, and Ridley 2017; Brunner, Spitzer, and Christanell 2012).

While the condition of interviewees' dwellings can be partially explained by their financially constrained situation, social factors such as the relation between a tenant and landlord make matters more complicated. While it is not always true that landlords have the financial means to improve their tenants' dwellings, they typically have more agency to do so than the tenants who typically have to ask for permission to make lasting changes in the dwellings. A study on energy poor households in the UK found that landlords in the private rental market may refrain from investing in energy efficiency because they run the risk of losing capital if the dwelling is not rented consistently afterwards (Middlemiss and Gillard 2015). Likewise, as observed in the present study and a study in Austria, tenants experience great insecurity and fright when it comes to improving the energy efficiency of the dwelling (Brunner, Spitzer,

and Christanell 2012). While tenants may invest, they run the risk of having to move before they have benefited. Additionally, tenants are afraid that if landlords make such investments, a rise of the price of rent will follow. In other words, it appears that landlords and tenants have mutually exclusive interests, and neither are guaranteed to benefit from investing in a dwelling that neither might sense is "theirs" (Lister 2017). This prevents large-scale improvements of energy efficiency from being made. We can imagine that disincentives to invest are greater the more investments are needed. In short, tenants appear to be stuck having to choose between paying the high costs of consuming energy in an inefficient dwelling, investing in energy efficiency themselves or risking higher rents when landlords invest – or they may move elsewhere.

The size of one's income limits the free choice of dwelling (Brunner, Spitzer, and Christanell 2012). Households living in energy poverty may continue living in energy inefficient dwellings because it is difficult to guarantee or predict that moving will lead to significantly better housing (Middlemiss and Gillard 2015). Often the interviewees report difficulties finding adequate housing, having to prioritize between concerns relating to the size of the rent, condition of the dwelling and social needs. This can be seen in light of energy-poor households' "social position and social mobility in the field of housing" (Silva and Wright 2009, 27). The study which explores the relationship between housing and socio-economic factors in the UK by drawing on Bourdieu's concepts finds that housing quality is predictable according to capital acquired with age and by different occupational classes (Silva and Wright 2009, 28). However, according to the present study, it is not simply the economic capital that determines social mobility in the field of housing, but also their employment status per se. The younger interviewees often link being a recipient of social benefits to having less agency in terms of finding adequate housing. Notably, some interviewees experience landlords who prefer tenants who are employed or students. If landlords discriminate based on employment status because they doubt whether recipients of social benefits can afford to service the rent, this doubt can be interpreted as produced by a welfare state and the unstable income it provides certain recipients.

Silva and Wright found that beneficiaries of better, outside-of-the-market accommodation often are adult children living in parent-owned dwellings (2009). On the contrary, the children-parent relationship observed in the present study is not as simple as beneficiary-provider. Several older interviewees – who are parents – have let their children inherit their

dwelling obliging their children to provide accommodation and be their landlord. These interviewees receive stable rent and housing condition and benefit from their children making some larger investments in energy efficiency Being parents of age who have raised and provided for their children, they appear to receive some entitlements in return, effectively giving them the role of a "super-tenant" that receives accommodation out of entitlement, not simply because they pay the rent (This will be discussed at length in section 8.6.). As such, they have virtually converted social capital into better accommodation.

8.3 The socio-materiality of energy consumption

In the previous chapter, we saw that many interviewees perform a wide array of coping strategies to manage high energy costs and cold winters. The great lengths many go in coping – such as minimizing heating, not having guests and isolating themselves – show that energy practices are bound together in bundles, defined as "loose-knit patterns based on the co-location and co-existence of practices" (Shove, Pantzar, and Watson 2012, 81). Energy practices are not only bound together by virtue of being performed in the same dwelling; in the case of electricity, energy practices are also bound together by being billed together. When electric lighting practices become more expensive so does electric heating. As such, the financial implications of these practices are connected. Therefore, rising electricity costs may have wide ranging effects. This is particularly the case for the younger interviewees who are largely electricity-dependent households who must pay whatever it costs to consume energy when it is consumed. It has already been said that cold weather shocks are equivalent to income shocks for households living in energy poverty, something which we have seen is particularly true for the younger households. For these households, the moment of consuming energy practices is intimately bound with the current electricity price per unit. With little leeway to store electricity in significant amounts, they rely on the liberalized energy market and its highly volatile prices (Winther and Bouly de Lesdain 2013). This is associated with further problems as the interviewees are unable to find significantly cheaper electricity subscriptions and perceive electricity suppliers to be unwilling to help. In sum, the vulnerability of electricity-dependent households is best illustrated by the excessive reduction in energy and other costs observed among the younger to cope with high electricity costs.

A study on elders living in energy poverty in Australia found that households' capacity to engage in energy saving practices depend on "the technical characteristics of the heating

system" (Willand, Maller, and Ridley 2017, 172). For example, the settings of thermostats and energy efficiency of heating technology have implications for heating practices and the costs associated with such practices. The most important observation made in the present study regarding the distributed agency of heating technology pertains to heating with firewood. The households with fire stoves, mostly elders, typically struggle less with maintaining an adequate indoor temperature at an affordable cost. They cut costs by stocking up on cheap firewood in preparation for the winter and receive firewood in the form of gifts from friends, family, and humanitarian organizations. These practices of winter preparation give them agency in response to increasing electricity cost rises per unit, effectively disconnecting heating practices from the fluctuations of the electricity market. This is especially true for households with, for example, district heating included in the rent. This "debundling" of heating practices is observed in the tendency among these households – particularly the elders with fire stoves – to almost occupy themselves exclusively with heating costs and practices, disregarding other energy costs.

The young electricity-dependent households depend financially on an electricity price which is largely determined by the demand of consumers who do not ration energy use. As such, these households are dominated in the field of energy consumers by more affluent consumers (households or businesses) who drive up the electricity prices. These arguments are particularly relevant in the context of Norway, an affluent country with one of the highest levels of domestic electricity consumption in the world, as sheen in Chapter 1. A large supply of hydropower has resulted in "electricity prices that have been historically low compared to the rest of Europe" (Westskog and Winther 2014, 100). Furthermore, with a high share of hydropower in the national energy mix, Norwegians consider electricity a sustainable and common good and see few reasons for reducing energy consumption, whether it be out of financial or environmental concern (Westskog, Winther, and Sæle 2015; Winther and Bouly de Lesdain 2013). By the token of their "careless" demand for electricity, more affluent households contribute in marginalizing energy poor households in Norway.

8.4 The normative dimension of energy consumption

Energy practices are often seen as inconspicuous and habitual (Shove 2003a). This must be understood considering perceptions and expectations of what "normal" comfort is. Shove writes elsewhere that energy practices "are intimately linked in reproducing what people take

to be normal and, for them, ordinary ways of life" (2003b, 395). She observes that there has been an escalation in the resource intensity of energy practices and comfort that the past decades, particularly in the West. She describes this process as a "systemic redefinition of «normal practice»" (2003b, 395). An example of the escalation is the increasingly precise heating and cooling technology that have been normalized and standardized, allowing consumers to "'play God' with the indoor climate" (Shove 2003a, 27). As these expectations of comfort become increasingly resource intensive, it is implied that "playing God" or simply living a "normal" life becomes a privilege of those with the necessary materials and finances.

Following rising expectations of comfort, I argue, coping strategies become increasingly outside-of-the-norm and thus visible. Drawing on a Bourdieusian concept, cold dwellings and coping strategies are *distinctions* of households' position in social space, carrying negative meanings (Bourdieu 2002a). This might explain why interviewees are too embarrassed or ashamed of themselves to have guests over during the winter. For example, Hards points out that status is typically associated with conspicuous practices that display wealth and taste, while turning down the heat and covering up in blankets display the opposite (2013). He continues that living in a cold and poorly lit home has been "linked with the 'spoiled identity' of a person who is poor or stingy" (Hards 2013, 446). Beyond social distinctions of status, the shame and stigma linked to coping strategies observed in the present study might be linked to the culturally specific context of Norway. As Wilhite and Lutzenhiser write in a study of social loading of sustainable consumption, the "home is for many a symbol to the outside world of the well being, taste and status of the family within" (1999, 282). In the context of Norwegian heating practices, they write that "[f]or a guest to give an indication that he or she is not comfortably warm constitutes a social crisis for the host" (Wilhite and Lutzenhiser 1999, 282). To insure against this, they observe that hosts will turn up to the heat before guests arrive, echoing observations made in the present study. As has been argued elsewhere, the great lengths households living in energy poverty can go to avoid appearing as such "are not lifestyle choices, so much as brutal necessities that cause people stress and shame" (Liddell 2012, 3). The interviewees find it important to be "normal". However, as has been observed in the present study, interviewees may avoid having guests and isolate themselves due to not being able to satisfy heating norms. The question of having guests therefore amounts to paying the costs of hosting or isolating oneself to cut costs. We can assume that such tendencies might grow stronger as the distance grows between the lifestyle of energy-poor households and the "normal" comfort zone. As such, the interviewees of the present

study are not able to “play God” in the words of Shove cited above but are victims of rising expectations of comfort they struggle to achieve. Trying to achieve comfort and cut costs at the same time, they resemble Sisyphus condemned by the Gods to roll a boulder up the hill, only for it to roll down again.

8.5 Habitualizing necessity

The magnitude cold weather induced income shocks differ among households. This is evident from the separation of heating practices from energy practices bundles in some cases. But it further impacts the younger and more vulnerable households who must cut domestic costs beyond energy use to scrape by during the winter. Importantly, many find themselves in what the literature calls the “heat or eat” dilemma (Beatty, Blow, and Crossley 2011; Grey et al. 2017; Lambie-Mumford and Snell 2015). Although the literature does not indicate that the one is directly sacrificed for the other (Lambie-Mumford and Snell 2015), this dilemma communicates that energy and food practices are bundled by the financial constraints of households living in energy poverty. As such, energy poverty is not merely being poor on energy, but involves financial constraints that condition virtually all practices. Households may respond to this situation by prioritizing differently. We have seen that some isolate themselves to cut energy costs, while some strive towards maintaining a “normal” lifestyle of social activities. However, disregarding differences in priorities, most must succumb to significant lifestyle changes suspending their “normality” during the winter.

The younger interviewees are particularly concerned with cutting costs wherever possible during the winter. Some even describe coping strategies that aim at maximizing the utility of energy use as habitual and automatic. However, it is still experienced as tiring and fatiguing to constantly be concerned with cutting costs, a concern that is experienced as in conflict with simply “living”. The younger interviewees are not simply living modestly by virtue of being unable to live lavishly. Rather, “adopting a modest lifestyle in various dimensions often becomes a necessary long-term strategy in order to cope” as was observed in a study on the coping strategies of energy poor households in Austria (Brunner, Spitzer, and Christanell 2012, 54). In the present study, interviewees endure an ongoing conflict between their aspirations of living “normal” lives where they do not need to be concerned with rationing constantly. However, the modest aspirations of being “normal” can be understood by drawing on Bourdieu. In describing how habitus dispositions the practices people engage in, he writes

that it limits their perceived horizon of opportunities and aspirations so that "the most improbable practices are excluded" (1977, 77). Drawing on the same theory, Brunner, Spitzer and Christanell interpret the modest demands of households living in energy poverty as manifestations of *habitus of necessity* (2012, 54). Beyond heating adequately, the interviewees of the present study most often feel excluded from "normal" practices such as going out, spending more time with friends and eat adequate food. However, Brunner, Spitzer and Christanell instead observed low demands related to housing such as an additional room to use as bedroom to avoid spending the night in the living room (2012, 54). We might interpret these different, but modest, aspirations as expressions of the wide-ranging impacts energy poverty have on households.

However, while the younger interviewees cope at the expense of living "normal" lives, the elders rarely express similar sentiments. The link between age and life satisfaction mirror the tendency that less affluent households tend to experience fewer welfare problems with age (SSB 2019a). The older interviewees seem rather content with living a modest lifestyle and take pride in managing their expenses wisely, explaining that they have acquired relevant competences and become habituated to modesty. As such, they appear to have adopted an *ethic of frugality* in the words of Anderson, White and Finney (2012). In their study, older energy-poor people tended to frame living on a low income positively, articulating that they "had found strength in the discipline of careful management of resources" (Anderson, White, and Finney 2012, 43). However, it is possible that the elders in the present study frame their situation in such a way to avoid being stigmatized. Notably, it has been found elsewhere that households might frame their motivation for engaging in energy saving practices that are associated with stinginess and poverty as forming an ethical life project to decrease the chances of being stigmatized or perceived as poor (Hards 2013). We might interpret this as elders being primarily frustrated with their inability to heat adequately at an affordable cost as opposed to them struggling horizontally to live a "normal" life. As such, they might feel a need to communicate that their heating-related challenges are not indications of them being "poor". However, as this discussion shows, there is little doubt that the elders are less marginalized than the younger interviewees.

8.6 Limits to social capital

The different sentiments expressed by the younger and elders regarding their lifestyles can be explained by the different positions they have in the fields discussed above. However, we have yet to delve into the personal relations of the interviewees. As Middlemiss and Gillard argue, there is a "need to understand household energy vulnerability as embedded in a larger social system", pointing to social capital as a central factor to energy vulnerability (2015, 152). The importance of social capital to households living in energy poverty has been affirmed elsewhere, as "[t]hose who dispose of a large social capital and are tightly embedded in social networks have less difficulty managing their lives in precarious conditions and shortage of resources than those who cannot draw on these resources" (Brunner, Spitzer, and Christanell 2012, 54). This echoes the findings presented in chapter 6. However, I argue that it is not simply a question of *quantity*, but also of *quality* of the social capital possessed. By this, I mean that possessing certain types of social capital involves possessing more power. As social capital is most often linked to family members in the present study, I argue that it is important to understand the general family context the interviewees find themselves in.

We can understand the family as a field that consists of unequal power relations like other fields. Unlike other fields, social relations within the field of family is more static, the relation between a child and a parent being largely determined. The child-parent relationship is important to understand the findings, as the younger interviewees largely depend on their *parents* to maintain an adequate during the winter, while the elders receive significant help from their *children*. Both groups express different sentiments when they receive help from children/family. The younger interviewees express feelings of dependency, unworthiness, and indignity having to rely on their parents to maintain their lifestyle and "normality" during the winter. On the contrary, the elders did not link negative sentiments to receiving free firewood or accommodation from their children, rather, it was taken for granted or "natural". We might understand this difference by considering the different positions the two groups have in the field of family. The relationship between a child and a parent initially rests on a hierarchical division of authoritative parent and subordinated child before the dependent child eventually reaches ages of 'consent' and 'maturity' (Atkinson 2014, 228). The "domination" of the parent is typically accumulative as the parent puts the child in debt by investing time, energy, and resources in caring for and raising the child. When the young interviewees ask their parents for support, it is within such a context of social indebtment (although the indebtment may vary from case to case). As adults they feel that they continue to depend on parents, something which is not "normal". However, when the elders receive help from their children,

the children are merely “paying back debt”. Parents do not experience help from children as dependency, but as an act of reciprocity. It is perhaps only expected or “normal”, in the case of the elders, that their children eventually help them in return. As such, the feelings of dependency and reciprocity in the two groups can be understood considering “*family-specific* doxa”, in other words, “taken-for-granted … senses of ‘what is done’ or ‘to be done’” as a child or parent (Atkinson 2014, 226). Following this line of thought, we may conclude that the elders, as parents, possess social capital with better currency strength.

8.7 Conclusions

In this chapter, I have drawn on concepts adopted from practice theory and presented in Chapter 3 to explore how the households experience and cope with energy poverty. The two groups experience and cope with energy in different ways, something I argue is linked to different degrees of marginalization in various fields of power (field of career, housing, energy market and family). The younger interviewees appear to be more vulnerable in all fields analyzed. Most of them, as tenants and recipients of social benefits, have less agency and leeway to ameliorate their financial, housing and energy situation. With no access to other energy resources, they are particularly vulnerable as electricity dependent households who must pay whatever the price for electricity is at any given moment. When winter comes and energy costs rises, the younger cope by cutting back on all living costs (energy, food, and social activities) and isolating themselves. They have little control over their own finances and are dependent on welfare entitlements as defined by the welfare state and their parents to live a “normal” lifestyle. In addition to being in a financially constrained situation, they fall victim to rising expectations of comfort and “normal” energy use. I have argued that rising expectations of comfort make strategies for coping with cold homes more outside-of-the-norm, making it difficult to have guests over and leading to feelings of shame, embarrassment, and stigma. In sum, many of the younger interviewees do not merely live modest or spartan lifestyles but feel “abnormal” and socially excluded from society.

The older interviewees are generally less vulnerable. While the younger interviewees change their lifestyle radically during the winter, the older interviewees are primarily concerned with coping with inadequate heating. Although the older interviewees also have low incomes, they have more financial control, receiving the stable income of a pension and not having to go through lengthy processes to claim payments. Additionally, they are less vulnerable to the

fluctuations of electricity prices, drawing on the social capital of their children to receive cheap or free firewood as well as making investments in the energy efficiency of their home. Furthermore, I have argued that the older interviewees, as parents, draw on social capital of greater currency strength to explain why they, unlike the younger interviewees, do not feel dependent or embarrassed when having to rely on support from their family. In sum, the older interviewees are not simply less vulnerable because they have better conditions linked to the triad of energy poverty (low incomes, energy inefficient housing, high energy costs). These factors are embedded in social contexts and fields of power that contribute positively elders' capacity to withstand cold winters.

To conclude, the seasonal variations observed in the interviewees' lifestyles suggest that their vulnerability to cold winters and high energy costs is a continuous state. For many, the chance of being plunged into energy poverty exists in a horizon of possibilities, being one harsh winter away. As such, the interviewees are not merely vulnerable *during* the winter, but winters unmask their general vulnerability.

9 Discussion and recommendations

In this thesis, I have analyzed the experiences of households living in energy poverty. The aim has been to explore what energy poverty means from the perspective of the households experiencing it and, in doing so, to contribute in exploring the currently unmapped territory of energy poverty in Norway. As such, it has not been the intention to objectively assess what causes energy poverty or monitor the energy consumption of such households. Rather, the aim has been to explore how the households use (or are unable to use) energy to achieve comfort and satisfaction. In doing so, I have not restricted my focus exclusively to energy use but have looked for how the households may change and adapt other aspects of their lifestyle – understood as a loose collection of practices – in response to energy poverty. I have drawn on practice theory to understand *how* the households make such changes as well as the social and material context in which practices are performed, including competences and knowledges used and meanings and emotions experienced by households. Additionally, I have aimed to understand the households' position in social space and in power relations.

The study has shown that many households experience energy poverty differently. During the winter, many interviewees endure cold temperatures in the home and electricity costs that are so high that it becomes difficult to stay comfortable or live meaningful lives. However, the households differ in terms of the challenges they face, the implications energy poverty has on their well-being and lifestyle as well as how they respond. In these respects, the households interviewed form two groups. Energy poverty has the most implications for the interviewees under 60 years. Facing significant financial constraints, many interviewees cope by making wide-ranging lifestyle changes, limiting their own welfare, and consequently struggling with emotions of social exclusion. The implications energy poverty has on the daily life of interviewees over 67 years is primarily limited to heating related concerns. Although most in this group live in cold dwellings during the winter, they tend to be rather content with living modestly.

In the following sections 9.1-3., I will answer the research question: How do vulnerable households in Norway experience energy poverty in everyday life? In section 9.2-3., I will dedicate more space to the subquestions of: How do vulnerable households cope with energy poverty? How does energy poverty have implications for the social and human wellbeing of households?

9.1 Sources for vulnerabilities of energy poverty

The different experiences and coping strategies of the two groups are linked to different vulnerabilities related to finances, housing, energy use and social networks. In Chapter 5 we saw that all interviewees have low incomes and most live in cold dwellings that suffer from a combination of factors such as draught, poor insulation and receiving little free heat from neighbors. However, the financial and housing related vulnerabilities of the two groups are not limited to differences in the size of income and energy efficiency of the home. The younger interviewees suffer more due to having largely *unstable* incomes. They experience great financial insecurity and must go through lengthy processes of claiming social benefits or working overtime to make ends meet. They also struggle greatly in acquiring the social benefits they are entitled to and receiving an additional benefit may lead to the loss of another. As such, I have made the case that the younger interviewees, by virtue of their financial situation, are subordinated to the bureaucratic doxa of: "show patience, wait, and you might obtain a benefit from the state" (Auyero 2011, 23). Consequently, they have little perceived capacity to influence their financial situation.

The tendency of energy-poor households to live in energy inefficient dwellings is strongly present in the material. There is agency built into the materiality of the interviewees housing that make heating cost intensive, as exemplified by drafts, poor insulation and little free heat from neighbors. The financial constraints of the interviewees are an important factor limiting their choice of housing. Several express finding it difficult to acquire adequate housing or perceive their home to be the best available alternative in terms of concerns such as rent, condition of the dwelling and personal needs. However, beyond the financial dimension of housing, some younger interviewees experience being discriminated negatively on the rental market due to being recipients of social benefits. As such, their housing alternatives are doubly limited by their low income as determined by the welfare state as well as by their social status as recipients of social benefits. Additionally, few find it sensible to invest in improving the energy efficiency of dwellings they rent. If they do so, they might be forced to move before they have benefited from the investment. On top of this, landlords making such investments might lead to them imposing higher rents. Therefore, the younger interviewees are largely stuck between having to pay the high energy costs implied by the energy

inefficiency of their home, invest in energy efficiency themselves, pay higher rents or move elsewhere.

Regarding finances and housing, the older interviewees are generally less vulnerable than the younger group. They receive stable, although low, incomes – typically in the form of a pension – and express the least financial stress. Many have acquired better housing conditions, either owning their home or renting from their children. The older interviewees also express less insecurity about having to move in the future. Notably, they have invested in improving the condition and energy efficiency of the home – often with practical or financial support from family members in investing and installing such measures. However, such investments appear to be limited by the low incomes of elders as well.

In Chapter 6 we saw that most interviewees, counting interviewees from both groups, struggle with heating their dwelling at an affordable cost during the winter. The interviewees feel that they have little power over the size of their electricity bills – a bill largely dictated by the need for heating services due to cold winters and increasing electricity prices per unit. Consequently, electricity bills fluctuate largely from summer to winter. However, it is difficult to foresee how great these variations will be, often implying unexpected high electricity bills during the winter. While many must spend up to 20% of their monthly income to service electricity bills during the colder months, the size of the bills are not indications of comfortable use of energy. Due to poor energy efficiency, many endure cold temperatures in the home despite emptying their pockets. However, while the younger interviewees tend to struggle with heating adequately at an affordable cost, many of the older interviewees are less concerned with the affordability of energy services. Importantly, almost all in this group have a fire stove as well as access to cheap and free firewood provided by family members and the humanitarian organization Operation Firewood. This makes them more financially resistant to cold winters, drawing on a stock of firewood to compensate for increasing electricity prices per unit. Consequently, heating services are not only more affordable for this group, but I have argued that heating practices are somewhat disconnected from energy practices fueled by electricity. This was observed in practice by the older interviewees' little mention of reducing energy costs beyond those related to heating.

The interviewees find it difficult to predict electricity costs for two reasons. First, they do not know how cold and for how long winters will last and, second, they do not know how high electricity prices will go. For electricity-dependent households, the insecurity of pricing is

implied in all energy practices from lighting to heating. With little feedback on energy use, any efforts to reduce costs may be rendered futile by rising electricity prices. This is perhaps especially the case for interviewees who suspect that they are paying for a share of their neighbors' energy use. I have made the case that electricity-dependent households are marginalized as consumers in the field of energy consumers, where more financially independent consumers who consume energy more carelessly contribute to driving up prices. To gain more control, some interviewees have tried to acquire knowledge of energy use, for example by using apps provided by their electricity provider, but many feel that they have already exhausted their capacity to reduce energy costs. Additionally, the technical side of energy use – such as kWh – is a barrier to understanding cost-efficient use of energy technology as well as which electricity subscriptions are the cheapest. And while several interviewees find eco-labeling of technology informative, very few interviewees mention having invested in new technology. In a few cases, interviewees were so afraid of high energy costs that they doubted whether recently acquired, energy efficient technology would lead to lower costs.

With unpredictable energy costs and low incomes, many interviewees feel that they have little influence over their own situation as energy consumers. Rather, they believe that international market dynamics and electricity suppliers that determine electricity prices and the conditions of electricity subscriptions. The offers and electricity subscriptions that exist on the market are not perceived as diverse, none being considerably cheaper than the other. On the contrary, changing suppliers more often leads to complications than benefits such as when, in their perception, aggressive salesmen coerce them into taking on catchpenny offers that are expensive in the long run. Many have also received unexpected backlog expenses in the thousands. When such problems occur, interviewees do not feel that electricity suppliers are willing to help or that their complaints and inquiries are considered or respected. A few have also even less control as energy consumers since they depend on the reliability of a landlord who is a middleman in terms of energy billing. Based on such experiences, interviewees have difficulties believing that they will benefit from the coming tariff structure made to incentivize flexible energy use.

9.2 Coping with energy poverty

As summarized in the previous section, the interviewees are constrained in several respects related to housing, finances, and energy use. Having little perceived influence over their own situation, getting by is often a question of coping as best as one can, something which has wide ranging implications for their well-being. For most, heat and energy are precious resources that many make sure to optimize to stay comfortable and avoid high energy costs. Many interviewees are constantly concerned with rationing on energy use and staying warm at the same time, a concern that is experienced as mentally exhausting. This is especially the case for the younger interviewees' electricity-dependent households who have few alternative fuel sources to use and are particularly concerned with cutting electricity use virtually wherever possible. Prevalent coping strategies in these respects are heating only one room, wearing warm clothes, covering up in (sometimes electric) blankets. However, many still endure cold temperatures in the home during the winter, something which is linked with deteriorating health. In this sense, those susceptible to freezing due to age and chronic diseases are particularly vulnerable. Coping strategies are associated with disruptions of the daily functioning of household. In particularly cold times, some have resorted to using untraditional heating sources such as candle lights, casseroles of boiling hot water as well as burning books, cardboard, and construction wood in the fire stove. The great lengths that many will go to cut costs has consequences for their social practices. Several interviewees isolate themselves in their cold homes or bedrooms and many will refrain from having guests over, deeming their homes unwelcoming and unhospitable for guests who would have to adopt a regime of coping strategies to stay warm. Therefore, many must choose between being alone to cut costs or turn up the thermostat to have guests over. I have interpreted these responses considering Shove's description of an escalation in resource intensity of energy practices and households "playing God" with their thermal environment (2003b). Being unable to satisfy norms and expectations of "normal" energy use, the interviewees' cold and dark dwellings are like distinctions of their social identity as deviant, "energy-poor" or abnormal. As victims of rising expectations of comfort, the households living in energy poverty resemble Sisyphus condemned by the Gods to roll a boulder up the hill, only for it to roll down again. Consequently, many feel embarrassed or ashamed of themselves for being socially excluded from normality in these respects.

Having a hard time influencing their own financial situation, most interviewees depend on their social network to get by during the winter. However, the nature of the support they receive differs as well as how they feel about receiving it. The younger feel unworthy or

undignified having to depend on financial support or loans from parents or friends – some have even received thousands of euros in donations from strangers. On the other hand, the elders do not receive direct financial support in the form of cash. Typically, they have family members who help them alleviate costs by targeted measures such as assisting in investing and installing energy efficiency measures, shop groceries as well as considerable amounts of cheap or free firewood. The elders do not mention experiencing such help negatively, but, as I have argued, rather like acts of reciprocity on the part of their children.

9.3 Habitus of necessity Vs. ethics of frugality

The younger interviewees' experiences with energy poverty have the widest span. The financial constrains that they endure during the winter have lifestyles implications beyond practices directly or indirectly related to energy use such as heating and hosting practices. During wintertime, they are forced to prioritize their spending to cover strictly necessary expenses over "pleasures". This involves giving up outside-of-the-home activities like not getting a haircut or going to cafés with friends. For these households, energy poverty is not merely a phenomenon that restricts their energy practices as well as their capacity to pay electricity bills and stay warm, but also a horizontal limitation of their lifestyle and all the other practices they would like to engage in. Many find it necessary to cut food costs by eating worse and less, having homogenous and unhealthy diets – in the worst cases, interviewees have resorted to asking for free food from humanitarian organizations. Limiting their welfare and social life in this way is a long-term strategy for scraping by. In my interpretation, this implies a *habitus of necessity* which is expressed by their humble demands of wanting to participate in "normal" practices (Brunner, Spitzer, and Christanell 2012).

The elders, on the other hand rarely mention cutting costs beyond heating costs. Instead, they appear to be content with living modest lives, having settled with living within the boundaries of their finances. They express finding strength in an *ethic of frugality* (Anderson, White, and Finney 2012), using their skills and competences at managing actively to make ends meet. The differences in sentiment between the two groups must be understood considering the comparatively stable finances and better condition housing as well as the fact that they are not forced to prioritize costs as strictly beyond concerns related to heating.

Contrasting the relative content of the elders, the younger interviewees long for normality. Their experience of living in energy poverty resembles being tossed back and forth, from summer to winter, in and out of society depending on electricity prices and seasonal climate. As such, they feel unable to participate in society as "normal" citizens. I have argued that normality is a social structure that functions like an ideal for the younger interviewees. They strive towards satisfying norms and conventions to fit in, to "be normal". But they are virtually doomed to fail, not having much perceived influence over their situation. Consequently, the dark and cold dwellings they live in are like manifestations of their identity as the opposite of normal: deviant, abnormal, energy-poor or similar. Feeling alienated in this sense is linked to perceptions of Norway as a class society. However, younger interviewees feel that their vulnerability is not acknowledged, perceiving that they must pay more and more fees, despite being socio-economically marginalized in one of the world's wealthiest countries. As an extension of this, they feel stigmatized by a society that perceives the socio-economically marginalized as responsible for their own misery, such as being too lazy to work. I have argued that a reason the younger recipients of social benefits experience such emotions – while the pensioners do not – must be understood in the context of the unemployed belonging to a comparatively small group compared to the rest of society consisting of "productive" individuals. It is more acceptable to become old than unemployed. In sum, due to experiences of social exclusion and stigmatization, many find it difficult to be open about the problems such as struggling to stay warm and pay for electricity.

The more vulnerable the households are, the less influence they have over their own situation. As such, the lives they live are situated in midst of a tug-of-war between summer and winter.

9.4 Research limitations and implications for further research:

In studying energy poverty, this thesis has explored how it is experienced by households. This includes how they make changes in energy habits and practices to cope with cold and financially difficult seasons. As such, I have only scratched the surface of what energy poverty is and the implications it has on households by studying their own consciousness of their situation and experiences. As noted in Chapter 4, there are limitations associated with studying people's consciousness of practices with habitual components. One of these

limitations is that the stories the interviews have shared with me are necessarily told from the perspective they had at the time of conducting the interviews – perspectives that may change. Not only may further interview-based studies uncover new perspectives and dimensions to household experiences to energy poverty, further research is needed to understand «the whole picture». For example, research combining other methods such as ethnographic observation, diary studies and quantitative data of domestic electricity consumption, use of different fuel carriers, housing conditions and size of households can provide perspectives and understandings of how and why households experience energy poverty over time. Additionally, there is a need for statistics on measuring how many households in Norway live in energy poverty and where the households are situated.

Generally, further qualitative research is needed to get a deeper insight into how Norwegian households cope and experience with energy poverty. More specifically, it is worth giving additional attention to certain households for geographical and demographic reasons. Norway is a long-stretched country and relatively decentralized in terms of patterns of settlement. In these respects, the present study has overlooked households living in the districts and smaller cities – where housing is cheaper and living in houses typically is more normal. These households may experience energy poverty differently, in positive and negative ways. Additionally, as a long-stretched country, there are large climatic differences between the south and north of Norway. The present study has exclusively studied the experiences of households living in southern parts of East-Norway. We can imagine that households living in regions with different climates struggle and cope in different ways than what this study has found. In this respect, it could be especially worthwhile to investigate experiences with energy poverty in households living furthest to the north, in regions with polar nights lasting for weeks and months on end. Another reason for studying energy poverty elsewhere is that the findings of the study are only linked to one of the five electricity price areas in Norway: the area of South-East Norway (NO1). These areas have been found to be subject to large variations in electricity costs. Notably, grid tariffs vary due to regional differences in maintenance and investment in the grid and households in North-Norway are exempt from paying several electricity related fees (Bleskestad, Holstad, and Aanensen 2015).

The present study has largely overlooked certain demographic groups. The study does only to a little degree explore households composing of families, immigrants, those employed, those having low income as well as living in shared flats and public housing. Additionally, there is a

need to research how single parents and students experience energy poverty. Furthermore, I have understood 'household' largely as a "monolithic unit" and have not explored the gender dynamics internal to the interviewees' family households and other multi-person households (Petrova and Simcock 2019). We may believe that different genders experience and cope differently with energy poverty and that these are linked to domestic inequalities.

By focusing on the household experiences, the present study risks masking the depth of bureaucratic and infrastructural processes that contribute to energy poverty such as an energy market or welfare state. While these aspects have been explored in this thesis, they have primarily been captured from the perspective of the households. Further research should apply multilevel approaches to understand the "other side of the story". There is a need for a greater understanding of how NAV manages inquiries from less affluent households who have trouble paying the electricity bills. The same applies for how electricity suppliers respond and treat the insecurity of less affluent households who, for example, believe they are paying more than they should or who believe they have unfairly received an expensive electricity subscription. We need to understand – at a bureaucratic level – why the insecurities and problems of households living in energy poverty, as the present study indicates, do not lead to improvements on the part of the households.

In the final months of writing this thesis, the Norwegian government implemented the most extensive restrictions on the freedom and daily life of Norwegians since the Second World War in response to the covid-19 virus. This situation involved great financial insecurity for many. People started bulking up on groceries and toilet paper and thousands of employees had to queue up to apply for social benefits from NAV, following the highest unemployment rate since the war (Mogen 2020). It is worth investigating how extraordinarily long queues at NAV affect less affluent households who have been waiting for welfare entitlements for years already. How does the vulnerability of households observed in the present study manifest itself in financial and health crises such as the one affecting Norway as I conclude this thesis? How do they experience it? Do they benefit from lower electricity prices due to industries slowing down production levels or are their finances disturbed by the insecurity of the crisis? Do such crises have long term consequences on energy poverty for these households?

9.5 Implications for policy:

Generally, the interviewees of the present study feel that they do not receive much needed support to get through winters, for example in the form of special electricity subscriptions provided by electricity suppliers or "winter benefits" from the welfare state. An important first measure to combat energy poverty is to establish a definition of vulnerable energy consumers for policy purposes in Norway. Notably, such a definition is important if energy poverty to be properly addressed as a political concern. Without such a definition, it is unlikely that the prevalence of energy poverty will be measured at regular intervals or that policy will be able to respond to vulnerabilities implicated in problems such as being unable to afford paying electricity bills and heat adequately.

How the energy market is regulated impacts energy poverty. A first step in protecting vulnerable energy consumers is to make electricity subscriptions more transparent, clearly stating the terms and conditions as well as the rights of the consumer. Additionally, by limiting aggressive marketing fewer vulnerable consumers risk being coerced into electricity subscriptions on vague terms that end up worsening their financial burden. A more targeted solution would be to put social tariffs in place for less affluent households. Additionally, the electricity complaint tribunal, Elklagenemda, was established in Norway in 1991 to solve contractual disputes between consumers and electricity suppliers and grid companies. Having a section of the tribunal dedicated to vulnerable consumers could prove advantageous to households such as those interviewed in the study.

The Norwegian welfare state also plays a significant role in alleviating energy poverty. It is important to develop safety nets in the welfare state to protect households against energy poverty. The findings indicate that housing allowance – which is of reach for most interviewees – is not an effective measure against energy poverty. Housing allowance should either become more easily attainable to low income households unable to pay electricity bills or, alternatively, we could imagine a smaller in size, more inclusive "energy support" that would specifically be to households with unproportionally high energy costs. Such an energy support could for example be given only during the colder months and be regulated according to variations in temperatures and electricity prices. Additionally, such support could be more broadly available to recipients of social benefits, pensioners as well as people having employment.

A long-term solution to energy poverty is to improve the energy efficiency of the homes of less affluent households. The local authorities in some regions occasionally offer free "energy

counseling" to provide households with more knowledge and consciousness of energy consumption as well as inspiring to making improvements in energy efficiency (Akershus fylkeskommune 2019). However, the offer is restricted to owners of dwellings. To include tenants living in energy poverty, such an offer could be changed to provide tips about small scale investments in energy efficiency as well as behavioral changes. In the UK, "energy doctors" review energy bills, check heating controls and contact energy suppliers of households living in energy poverty to utilize potentials for improvement and solve issues (SHINE 2020). Such energy doctors could provide Norwegian households with advice on small investments to reduce, for example, water and space heating without reducing use of such services. Additionally, it could provide households with more knowledge as well as an "expert" who can recommend electricity subscriptions and help resolve issues and misunderstandings with electricity suppliers. This could be particularly helpful for households who feel that they have exhausted their capacity to reduce energy costs by changing behaviors and habits.

Furthermore, there is a pressing need for large scale improvements of energy efficiency in dwellings. For as long as the public initiative ENOVA only subsidizes 25% of energy efficiency measures, it risks mostly benefitting more affluent households. ENOVA should develop a more progressive subsidizing scheme, for example, by subsidizing all households in proportion to their income. Additionally, as ENOVA only subsidizes owner occupiers, the initiative excludes tenants – a group which dominates the interviewees of the present study and is identified as vulnerable to energy poverty according to the literature, as seen in Chapter 2.

Lastly, it is crucial that the concerns of less affluent households be considered when developing and implementing the new tariff structures, as recently proposed by NVE. While the interviewees disliked the idea of evening out their energy consumption throughout the day to cut costs, we might imagine that such a tariff structure could be to the benefit of the least affluent if designed properly. Notably, if the tariff structure can distinguish between and price energy services differently, it could be designed progressively. For example, it could be designed to not penalize basic energy services such as heating, lighting and cooking in peak hours, only penalizing "secondary energy services" that typically the more affluent households use, such as charging electric cars, floor heating and running hot tubs.

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Appendix 1: Interview guide

Hverdag:

- Hvor lenge har du bodd her?
- Bor du med andre personer (eller dyr)?
  - Hva driver de andre med?
- Hvor komfortabelt har du det her?
- Hvordan ser en typisk dag ut?
  - Varierer de mye?
  - Helgen
  - Ukedager
  - [Hvis ikke nevnt] Lager du mye mat, vasker boligen og klær, jobb, stelle med barn
- Hvor tilbringer du dagene?
  - Hjemme?
  - Utenfor hjemmet?
- Hvor aktiv er du?
- Hva slags utfordringer har du med strøm og energi?
- Tenker du mye på strømforbruk?
  - Hva bruker mest strøm i boligen?
- Når du begynner å bli kald hjemme, hva gjør du?

Bolig:

- Har du hatt mange problemer med selve boligen?
  - Dårlig isolasjon
  - Trekk
  - Lekkasje
  - Råte

Strømregning

- Hva slags strømabonnement har du?
  - Spotpris
  - Fast pris
  - Variabel pris
- Hvor ofte kommer strømregningen?
- Vet du hva den kommer på ca?
- Hvor nøye ser du på den?
  - Ser du på nettleie og strømpris
- Hva føler du når strømregningen kommer?
- Hvordan håndterer du en overraskende dyr størmregning?
  - Venner
  - Familie

    - lån
    - Selge noe
    - Staten
    - Organisasjoner
    - Annet?
- Hva er den tøffeste perioden du har opplevd?
    - Dyreste strøm
    - Hvorfor ble det dyrt?
    - Hva gjorde du?
    - Hvordan hadde du det i den perioden?
- Gjør du tiltak for å redusere strømregningen?
    - Hva er det beste tiltaket?
    - Endrer du noen vaner som egentlig er nødvendig å ha?
    - Hvordan føles det å tilpasse seg?
- (Hvis flere i husholdning) Hvem er sjefen i huset over strømforbruket og strømsparende tiltak?
    - Hvorfor er X sjefen?
    - Har du alltid (ikke)vært sjefen?
    - Hvem bruker mest energi?
    - Har dere mye kunnskap om energi og sparing?
    - Diskuterer dere forbruket mye?
    - Hvor (u)enige er dere?
    - Er X ansvarlig for å betale strømregningen?
    - Hvordan preger høye strømpriser forholdet mellom dere?
    - Er dere flinke til å samarbeide?
- I hvor stor grad preger dette deg/dere?
- Hva er det som bidrar mest til at strømregningen blir høy?
- Har du investert i noe energisparende teknologi?
    - Renovert boligen?
    - Sparepærer?
- Hva tenker du hvis strømmen blir enda dyrere med vinteren som kommer enn i fjor?
- Hvor lenge har du/dere opplevd dette?
- Begynte det på et spesielt tidspunkt?

Oppvarming

- Hvor godt utrusta er du med ovner osv til å varme opp boligen?
- Hva slags dingser har du?
- Hva slags energikilder?
- Hvordan pleier du å varme opp boligen?
    - Om natten
    - På jobb/borte
- Varmer du opp rommene ulikt?
- Hvordan tilpasser du varmen?
    - Termostat

    - Sentralfyring
    - Har du en fast temperatur eller er det typ 1-10, min-max-skala?
- Hvor varmt pleier du å ha det?
    - Hvor varmt skulle du ønske at du kunne ha det?
    - Hvor ofte har du den temperaturen?
- Har du noen andre måter å varme opp på?
- Hvordan pleier morgenen å være?
- Hva føler du når du står opp?
- Hvordan forandrer oppvarming seg gjennom året?
    - Vinteren
- Følger du med på været og strømpriser?
    - Preger det deg?
- Har du gjort noen drastiske tiltak hvis det har vært skikkelig kaldt?
    - Hvordan føltes det?
- Har du hatt mange problemer med oppvarmingsdingsene?
    - Reparerer du?

Strømleverandør

- Problemer med leverandør?
- Har du bytta før?
- Stoler du på strømleverandøren?

Helse

- Preger utfordringene deg mye?
- Påvirker dette helsa di?
    - Fysisk
    - Psykisk
- Når var du sist hos legen?

Sosialt

- Snakker du med andre om utfordringene dine?
    - Om strømregninger
    - Om oppvarming
    - Om økonomi
    - Kan de relatere seg? Har de samme utfordringer?
- Kjenner du andre i samme situasjon?
- Er det noen som kan hjelpe deg når det er vanskeligst?
    - Venner
    - Familie
    - Hvordan føles det å ha dem?
- Hvor mye forandrer dette seg i løpet av året?
- Hvordan er forholdet til utleier? Snakker du med vedkommende om energiutfordringer?

    - Har dere snakket om energieffektivisering?
    - Har du tenkt på å flytte på grunn av boligsituasjonen eller utleier?
- Opplever naboene dine det samme?
- Tror du at alle har lignende erfaringer hjemme?
- Tror du de gjør samme tiltak som deg?

Fritid

- Hva liker du å gjøre på fritiden?
- Hva gjør du for å ha det bra eller gøy?
- Har du det bra hjemme?
- Glad i å lage mat, se på TV, lese, teater, kino, stand up, dra på bar?
    - Spiser du noe vegetarmat?
- Aktiv på sosiale medier?
- Er det noe strømutfordringene holder deg fra å gjøre?
- Er du mye sosial?
    - Besøker du dem eller de deg?
    - Endrer energibruken seg når du har besøk?
    - Er det det samme når du er på besøk hos dem?
- Hva gjør du med strømmen når du forlater hjemmet?

Bil

- Hva slags transportmidler bruker du i hverdagen?
- Hva trenger du transport til å gjøre i hverdagen?
    - Jobb/studier
    - Handle
    - Sosialt
    - Fritid?
- Er det enkelt å reise dit du vil og må?
    - Langt til kollektivtransport?
- Hvilke transportutgifter har du?
    - [BIL]Følger du noe særlig med på bensinprisene?
    - [OFFENTLIG] Månedskort, enkeltbillett, (sniking?)
- Er transportutgiftene en utfordring?
- Hender det at det er for dyrt å reise dit du skal?

Appendix 2: Invitation letter

UiO : Senter for utvikling og miljø
Universitetet i Oslo

25.9.2019

Bli med på forskningsintervju - motta gavekort på 500 kroner

Har du hatt problemer med å betale strømregningen i det siste? Eller hatt vansker med å holde det varmt nok hjemme på vinteren? Fortell om dine erfaringer i en ny forskningsstudie.

Jeg skriver masteroppgave ved Universitetet i Oslo og ønsker å undersøke hvordan varierende/høye strømregninger påvirker husholdninger som har utfordringer med oppvarming og annen energibruk.

I Norge vet vi lite om hvordan strømprisen slår ut for forskjellige grupper i befolkningen. Jeg ønsker derfor å få kontakt med husholdninger som i løpet av det siste året har endret vanene sine eller hatt problemer med å opprettholde en tilfredsstillende innetemperatur hjemme på grunn av høye strømregninger.

Et begrenset antall deltakere (15-20) vil bli invitert til et intervju der hensikten er å forstå hvordan strømpriser oppleves og påvirker din/deres hverdag. Intervjuet vil vare omtrent en time og vil bli gjennomført fra oktober til desember 2019. Det er en fordel om intervjuet kan gjennomføres i deres hjem, men det går også an å avtale annet møtested. Husstander som deltar vil motta et gavekort på 500,- kr.

Det er frivillig å delta og du kan trekke deg når som helst uten å oppgi grunn. Det vil ikke ha noen negative konsekvenser for deg om du trekker deg fra studien. Alle som deltar vil bli bedt om å gi sitt skriftlige samtykke til å delta. All informasjon vil bli anonymisert før resultatene publiseres, og ingen resultater vil kunne spores tilbake til deg. Alle navn vil bli slettet etter to år. Dataene vil kun være tilgjengelig for godkjente prosjektdeltakere, og vil bare brukes til det formålet som er beskrevet her.

Jeg håper du/dere ønsker å møte meg!

Påmelding gjøres ved å sende epost til: torjuslb@student.hf.uio.no

Når du melder deg på, vil jeg gjerne at du opplyser om:

- Ditt navn, kjønn og alder
- Telefonnummer og post-adresse og epostadresse
- Antall medlemmer i husholdningen og om du/dere eier eller leier boligen du/dere bor i
- Omtrent hvor mange ganger i løpet av det siste året (fra juli 2018 til juni 2019) du/dere har hatt problemer med å betale strømregningen

Med vennlig hilsen,

Tanja Winther

Professor, SUM (Veileder)
Leder, INCLUDE

Torjus Lunder Bredvold

Masterstudent, SUM

Postadresse: Pb 1116 Blindern, 0317 Oslo
E-post: info@sum.uio.no
Nettside: www.sum.uio.no
Telefon: 22 85 89 00

Appendix 3: Consent form

Vil du delta i forskningsprosjektet
"Where no one is poor, and energy is abundant": A study of energy poverty in Norwegian households?

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å studere hvordan. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål
Studiets formål er å skaffe kunnskap om hvordan høye strømpriser og kalde vintre oppleves av husholdninger med utfordringer med å betale strømutgifter, varme opp boligen tilstrekkelig eller andre energi-relaterte utfordringer. Nesten alt man gjør i hjemmet forbruker strøm, derfor vil endringer i strømpriser og værforhold påvirke hvordan folk lever. Via forskningsintervju vil studiet undersøke hvordan husholdningene håndterer og tilpasser seg slike utfordringer, og hva det har å si for deres livskvalitet og helse. Relevante problemstillinger er hvor stort handlingsrom husholdningene selv har til å påvirke sin egen situasjon og hvilke løsninger og tiltak som eksisterer eller ei.

Studiet vil publiseres som en masteroppgave på 90-130 sider.

Hvem er ansvarlig for forskningsprosjektet?
Senter for utvikling og miljø ved Universitetet i Oslo er ansvarlig for prosjektet. I tillegg bistår Fridtjof Nansens Institutt med faglige tips.

Hvorfor får du spørsmål om å delta?
Du har fått tilbud om å delta i studiet på grunn av din erfaring og opplevelser med store strømutgifter, kalde vintre eller andre energi-relaterte utfordringer. Kunnskap om dette vil gi innsikt i hvordan hverdagen til folk (livsstil, behov og velvære) påvirkes av vær og økonomi. All deltakelse er frivillig (se under og all data som samles inn med samtykke kan bli publisert i den endelige masteroppgaven.

Hva innebærer det for deg å delta?
Deltakelse i studiet innebærer å være med på et intervju som varer ca. 1 time. Intervjuet kan bli dokumentert med en lydopptaker eller ved skriving av notater. Intervjuet vil i stor grad være fritt og uformelt med mål om å ha en meningsfull og åpen samtale om strømforbruk, utfordringer med energi og generell livsstil. Underveis vil det bli stilt spørsmål for å lede samtalen inn på enkelte temaer eller oppklare misforståelser. Som deltaker kan du velge selv hva og hvor mye du ønsker å dele og er ikke forpliktet til å svare på alle spørsmål.

Det er frivillig å delta
Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke

samtykke tilbake uten å oppgi noen grunn. Alle opplysninger om deg vil da bli anonymisert. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger
Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket.

- Personlig data vil kun være tilgjengelig for godkjente prosjektdeltakere: masterstudent Torjus Lunder Bredvold, veileder og professor Tanja Winther ved Universitetet i Oslo og faglig kontaktperson Tor Håkon Jackson Inderberg ved Fridtjof Nansens Institutt.
- All data vil lagres på en sikker universitetsserver og beskyttes med et passord. I tillegg vil navn og kontaktinformasjon erstattes med en kode og lagres på en egen navneliste adskilt fra øvrige data.

Deltakere i studiet vil ikke kunne gjenkjennes i den publiserte masteroppgaven.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?

Masteroppgaven skal etter planen være ferdig innen 15 mai 2020. All elektronisk informasjon vil slettes innen 15 mai 2021.

Dine rettigheter
Så lenge du kan identifiseres i datamaterialet, har du rett til:
- innsyn i hvilke personopplysninger som er registrert om deg,
- å få rettet personopplysninger om deg,
- få slettet personopplysninger om deg,
- få utlevert en kopi av dine personopplysninger (dataportabilitet), og
- å sende klage til personvernombudet eller Datatilsynet om behandlingen av dine personopplysninger.

Hva gir oss rett til å behandle personopplysninger om deg?
Vi behandler opplysninger om deg basert på ditt samtykke.

På oppdrag fra Universitetet i Oslo har NSD – Norsk senter for forskningsdata AS vurdert at behandlingen av personopplysninger i dette prosjektet er i samsvar med personvernregelverket.

Hvor kan jeg finne ut mer?
Hvis du har spørsmål til studien, eller ønsker å benytte deg av dine rettigheter, ta kontakt med:
- Senter for utvikling og miljø ved Universitetet i Oslo via Torjus Lunder Bredvold (torjuslb@student.hf.uio.no) og veielder og professor Tanja Winther (tanja.winther@sum.uio.no)
- Vårt personvernombud: Maren Magnus Voll (personvernombud@uio.no)

- NSD – Norsk senter for forskningsdata AS, på epost (personverntjenester@nsd.no) eller telefon: 55 58 21 17.

Med vennlig hilsen

Torjus Lunder Bredvold, prosjektansvarlig
Masterstudent

Tanja Winther
Veileder

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet *"Where no one is poor, and energy is abundant": A study of relative energy poverty in Norwegian households*, og har fått anledning til å stille spørsmål. Jeg samtykker til:

- ☐ å delta i intervju
- ☐ tillate at opplysninger oppgitt under intervjuet kan brukes i masteroppgaven som sitat eller parafrasering.
- ☐ at personlige opplysninger brukes, men uten bruk av ditt ekte navn.

Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet, ca. 15 mai 2021

(Signert av prosjektdeltaker, dato)