

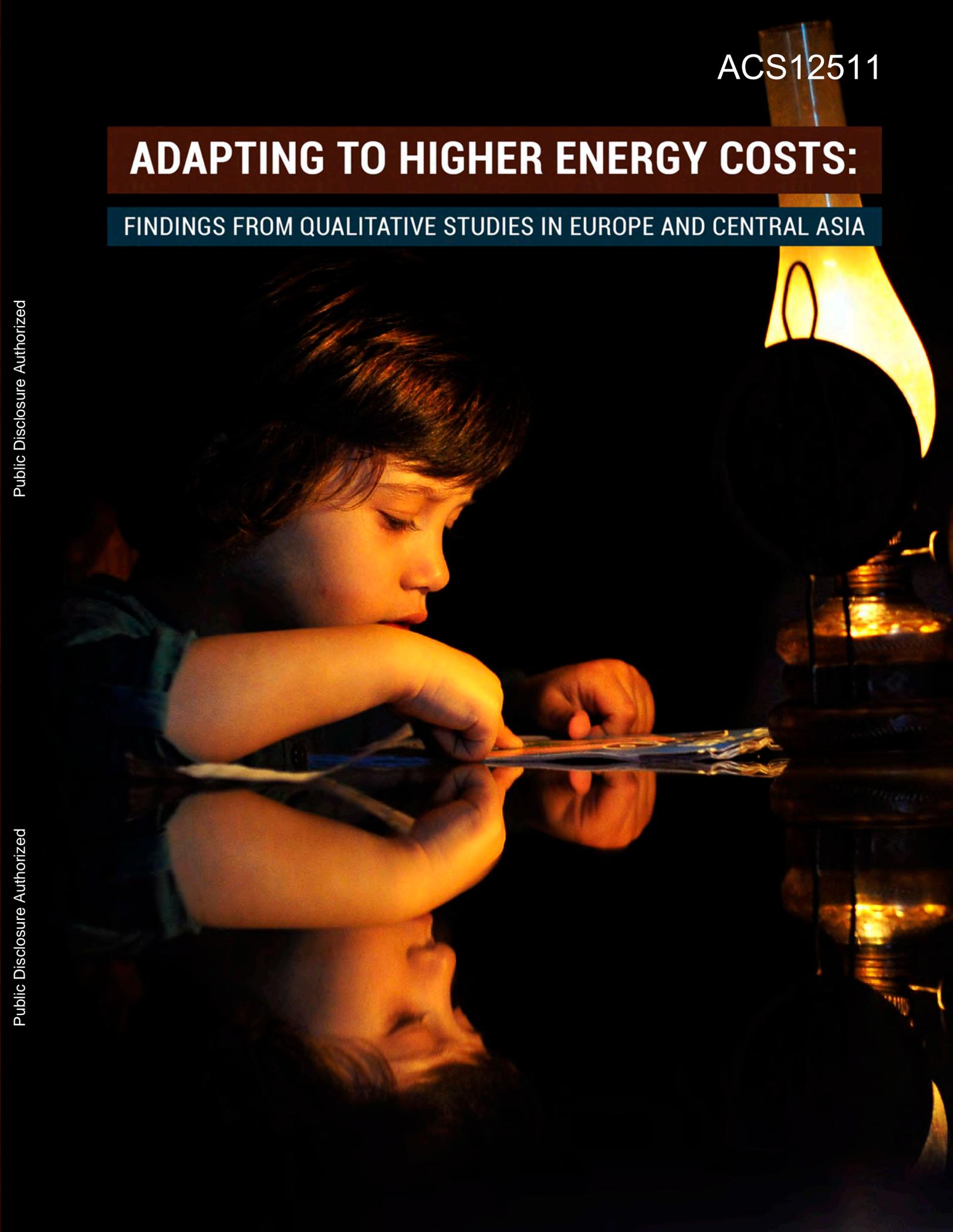
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ADAPTING TO HIGHER ENERGY COSTS:

FINDINGS FROM QUALITATIVE STUDIES IN EUROPE AND CENTRAL ASIA

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ACKNOWLEDGEMENTS

This report was written by a team consisting of Michelle Rebosio (Task Team Leader), Sophia Georgieva (lead author), Ekaterina Romanova, Nicolas Perrin, Zeynep Darendeliler, Ezgi Canpolat, Ecaterina Canter, Klavdiya Maksymenko, and Izabela Leao. Data gathering and initial analysis was carried out by multiple firms, including Ameria CJSC (Armenia), M-Vector (Kyrgyz Republic), Center of System Business Technologies SATIO (Belarus), Metro Media Transilvania (Romania), Vitosha Research (Bulgaria), GfK (Croatia), Center of Sociological Research "Zerkalo" (Tajikistan), and e.Gen Consultants Ltd (Turkey). Ekaterina Romanova supervised the work on the Kyrgyz Republic and Armenia. Nicolas Perrin supervised the work on Belarus. Sophia Georgieva supervised the work on Bulgaria, Croatia, and Romania, and contributed to the work on Belarus. Izabela Leao contributed to the work on Belarus. Zeynep Darendeliler led the work in Turkey. Rob Swinkels and Sophia Georgieva led the work in Tajikistan. Ezgi Canpolat provided first drafts of sections in the final report. The report was edited by Lauri Scherer and designed by Danielle Christophe. Victoria Bruce-Goga provided administrative support and Ewa Sobczynska worked with the team on completing and disseminating the report.

The team would like to thank all of those who have contributed to the thinking that led to this report, including the firms cited above and our peer reviewers. We are especially grateful to Ani Balabanyan, Caterina Ruggeri Laderchi, Nistha Sinha, Matteo Morgandi, Heather Worley, Vanessa Lopes Janik, Maria Beatriz Orlando, Rebecca Lacroix, Niki Angelou, and Rob Swinkels for their input and advice. The team would also like to thank Elisabeth Huybens and Maninder Gill for their leadership as well as Ranjit Lamech, Carolina Sanchez, and Andrew Mason for their support for this work. We would also like to thank the hundreds of individuals, including government officials, who participated in the focus groups and interviews that led to this report. This work would not have been possible without funding from the Umbrella Facility for Gender Equality and the Poverty and Social Impact Assessment Multi-Donor Trust Fund.

ABBREVIATIONS

BGN	Bulgarian Leva
CIS	Commonwealth of Independent States
CSO	civil society organization
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECA	Eastern Europe and Central Asia
EI	ethnographic interview
ESW	economic sector work
EU	European Union
FBP	Family Benefit Program
FG	focus group
FGD	focus group discussion
GAP	Southeastern Anatolia Project
GDP	gross domestic product
GMS	guaranteed minimal support
GoA	government of Armenia
GoB	government of Belarus
HB	heating benefit
HEP Group	Hrvatska Elektroprivreda
HERA	Croatian Energy Regulatory Agency
IDI	in-depth interview
ILCS	Integrated Living Conditions Survey of Households
IOM	International Organization for Migration
NGO	nongovernmental organization
PEA	political economy analysis
PSIA	Poverty and Social Impact Assessment
PSRC	Public Services Regulation Commission
PVC	polyvinyl chloride
RoA	Republic of Armenia
RON	Romanian Leu
TRY	Turkish lira (approximately equal to 0.44 USD)
UNDP	United Nations Development Programme

I. INTRODUCTION

1. This report presents findings from 208 focus group discussions (FGDs) held across eight countries¹ in Eastern Europe and Central Asia (ECA) between 2013 and 2014 that examined households' experiences with and attitudes to energy tariff reforms. Over the past five years, the World Bank has provided guidance to more than 14 countries in the region on implementing energy subsidy reforms. This work complements a large body of research on the poverty impacts of these reforms. Specifically, it gives voice to poor and middle-income citizens, and presents their perspectives and concerns with regard to rising tariffs and reforms in the energy sector overall. The report argues that by gaining a deeper understanding of the narratives that people attach to energy issues, governments can design better mitigation policies to address the reforms' adverse impacts; better communication campaigns to convey the rationale of reforms to the public; and institute stronger accountability measures to help citizens protect their rights as consumers.

2. Countries in ECA have undertaken a wide range of energy sector reforms since the 1990s. For most of the twentieth century, ECA states ensured access to energy for residential consumers at little or no cost. To keep prices

down, governments subsidized or cross-subsidized energy producers. With the rise of international energy prices, the growing need for investment in the domestic energy networks, and the fact that ECA economies are very energy intensive, subsidizing energy at this rate has become unsustainable. Faced with domestic fiscal pressures and international requirements to liberalize their energy markets, many ECA states have embarked on energy reforms aimed at introducing greater competition in the sector, removing subsidies, and allowing tariffs to rise to cost-recovery levels.

3. There are three main factors that drive the need to reduce subsidies and increase tariffs in the ECA region.² First, pressure to increase tariffs comes from increasing international prices for imported energy, such as gas and electricity. Only five ECA countries have naturally abundant energy resources; the other states in the region are dependent on imports.³ Second, countries in the region subscribe to international agreements and institutions that mandate institutional and regulatory change. Because of these agreements, by 2010, all but five countries

¹ In Armenia, Belarus, Bulgaria, Croatia, the Kyrgyz Republic, Romania, Tajikistan, and Turkey.

² For a detailed discussion on pressures for subsidy removal and tariff increase in ECA, see Ruggeri Laderchi et al. (2013).

³ The five states are Russia, Uzbekistan, Azerbaijan, Kazakhstan, and Turkmenistan. By contrast, Moldova depends on imports for over 90 percent of its energy consumption (Ruggeri Laderchi et al., 2013).

had established an energy regulator; many had unbundled domestic generation, transmission, and distribution networks; and some had allowed private providers on the domestic market. Finally, it is necessary to raise tariffs in order to cover generation, transmission, and distribution costs, and to enable sector institutions to invest in the maintenance and expansion of transmission and distribution networks.

4. Reform progress across the region has been slow and uneven. Countries now face multiple pressures to speed up reforms. For example, new and candidate European Union (EU) member states need to meet obligations for EU accession and EU targets related to energy efficiency and renewable energy use, among others. Countries that rely heavily on imported natural gas and electricity (for example, Belarus, Moldova) face pressures to reduce subsidies so as to avoid accumulating high debts to foreign suppliers. Other states, such as Tajikistan, need to increase tariffs in order to mobilize resources for network maintenance and to develop more energy sources to address domestic shortages. However, due to the social sensitivity of reforms and a variety of domestic stakeholder interests, these governments have struggled to remove subsidies and complete the implementation of legal and institutional reforms.

5. A lot of research has already been carried out in the ECA region to help governments address the complexities of energy subsidy reforms. The 2010 World Bank report "Lights Out: The Outlook for Energy in Eastern Europe and Central Asia," highlights the significant investments the energy sector needs to avoid supply difficulties. The report emphasizes that the required actions, both on the demand and supply side, would cost approximately 3 percent of cumulative

GDP between 2010 and 2030. Without this level of investment, the report states, countries are likely to experience costly energy shortages. The 2010 World Bank report "Crisis Within a Crisis?" examines the impact of the 2008 global financial crisis on the power sector in five ECA countries.⁴ It shows that while the crisis served to slow domestic energy demand and thus delay an imminent shortage, it also further decreased available funding for investments in the sector, making subsidies harder to sustain.

6. Removing subsidies and consequently raising energy tariffs can have a considerable poverty and social impact. Most countries in ECA have long, cold winters, and saving energy is difficult for certain populations, especially those that live in poorly insulated housing. This is why tariff increases over the past decade have not led to a significant decline in energy consumption, but have instead resulted in an increased financial burden on household budgets, with potentially adverse impacts on other areas of well-being. Ruggeri Laderchi et al. (2013) present a regional assessment of the distributional impacts of raising energy tariffs to cost-recovery tariffs, based on a database of standardized household surveys. This report estimates that increasing electricity and gas tariffs to cost-recovery levels can raise poverty levels by 5–30 percent, depending on the country.⁵ It states that countries should consider a mix of mitigation measures, including social assistance and energy efficiency, in order to support continued affordability.

4 Armenia, the Kyrgyz Republic, Romania, Serbia, and Ukraine.

5 In EU member states the range of poverty impacts is wide (5–30 percent), estimated to be the largest for Bulgaria and Romania. In Eastern Partnership and other CIS countries, poverty rates could rise by 4–8 percent; in EU candidate and potential candidate countries they could rise by 3–10 percent.

7. Various other studies have estimated how removing energy subsidies would impact consumers, and how such impacts can be mitigated. A study done by the European Bank for Reconstruction and Development (EBRD) (Frankhauser and Tepic, 2005) concludes that whether tariff reforms are affordable depends on the speed of tariff adjustments relative to the growth of household income, the level of tariffs needed for cost recovery, and the demand response to tariff increase. This study highlights the risks of delaying tariff reforms as a way to mitigate social impacts. A 2003 EBRD report focusing on electricity affordability in eight southeast European states found that power affordability is a problem for many consumer groups (such as pensioners, unemployed, and low-income households), and that countries had not developed adequate social safety net mechanisms to address the potential impacts of power tariff reforms. Some studies argue for developing a more precise mechanism for measuring energy poverty, and to address it through a comprehensive set of policy tools (see Buzar, 2007; Nussbaumer et al., 2011; Gazizullin et al., 2013).

8. The current report complements prior research on energy affordability through a set of qualitative findings that reveal households' experiences and perspectives in coping with rising costs of energy; factors that influence their vulnerability; and their opinion of policies and programs that can support energy affordability through the course of reforms. This research also examines the level of understanding that different household groups have of energy sector reforms, and reasons why they accept or oppose the reforms. As such, the report aims to help practitioners design energy sector policies that are socially sustainable and more acceptable to the public.

PURPOSE OF THE REPORT

9. This report examines poverty and social impacts of energy tariff reforms in the ECA region from citizens' perspectives. It aims to complement previously collected quantitative data on distributional impacts of reforms, and contribute to the design of socially sustainable energy policies and effective mitigation measures. It presents qualitative research findings that highlight:

- (i) factors affecting household vulnerability to energy tariff increases;
- (ii) insights into how households cope with increasing energy prices;
- (iii) experiences with and perceptions of energy sector institutions and, more specifically, interactions with energy service providers;
- (iv) experiences with social assistance programs and overall attitudes toward measures that make energy more affordable; and
- (v) consumer attitudes toward energy sector reforms overall.

10. Incorporating qualitative evidence in the study of poverty and social impact of energy reforms is essential to better understand both impacts and attitudes to reforms. First, by relying on open-ended questions and being exploratory in nature, qualitative research is well suited to examining a wide range of impacts beyond monetary ones, and to illustrate what it means for a household to cope with higher energy prices. It explores how households prioritize their spending, how they have experienced prior tariff increases, what parts of their budget are most affected, and how they perceive the impact on

their well-being. By collecting perspectives from different households and contexts, this research helps to identify a wider range of factors that affect household vulnerability, as well as social groups whose ability to afford energy for basic needs may be at higher risk. Since household energy expenses do not always follow a regular monthly pattern, qualitative research also helps to identify times of higher stress to the household budget and to suggest improvements in data collection and mitigation measures that consider such seasonal discrepancies and level

out the financial burden on households.

11. Second, because qualitative research is perception based, it is well positioned to capture attitudes regarding both the reforms and mitigation policies put in place to offset negative poverty and social impacts. Lack of public acceptance, as well as fear of social mobilization against reforms, have been some of the key obstacles to their implementation. In addition to affordability concerns, citizens' opposition to the reforms may be rooted in

BOX 1. WHY USE MIXED METHODS TO ASSESS IMPACTS OF ENERGY REFORMS?

Combining qualitative and quantitative research to examine the impacts of energy tariff reforms in ECA has heralded various benefits. In some cases, qualitative research generated knowledge that can be used to improve the relevance of quantitative research. For example, it confirmed that the energy expense burden for a large number of households is concentrated in the 3–6 coldest months of the year. Collecting expenditure data separately for the heating and nonheating seasons can paint a more accurate picture of the challenges presented by growing energy tariffs to the household budget, compared to average annual spending.

FGDs also add depth to findings, revealed through quantitative data, and are useful when considering appropriate policy solutions. In Serbia, where utilities struggled with low collection rates for services in certain communities, FGDs showed that many households were unable to cope with high interest rate payments, which perpetuated a cycle of debt and nonpayment. Similarly, in Turkey's southeastern region, where payment rates for energy were disproportionately low, qualitative research revealed a range of political and socioeconomic factors that augmented mistrust towards energy providers, and affected households' willingness to pay. A 'social compact' approach was piloted in this region to improve trust as well as collection rates.

Qualitative and quantitative information can sometimes lead to controversial findings. Exploring these contradictions provides insight into people's perceptions that drive their attitudes to the reforms. For example, many FG respondents in this research have provided consistently inflated estimates of the share of their income spent on energy sources. This could partly be attributed to their desire to emphasize that energy expenses present a serious burden to the household. However, researchers also observed that respondents tend to consider only their sources of steady formal income (salary, pension) when estimating the share of energy expenses, not informal or seasonal work, self-produced food, and so on. Their anxiety over the prospect of rising tariffs was strongly tied to unpredictable incomes, as many households have begun to rely increasingly on incomes from migration and informal work, which may fluctuate over time.

lack of awareness about the reforms' rationale; legacy of a former social contract in which low-cost energy was seen as an entitlement; as well as an array of concerns about transparency and accountability of state institutions and energy providers. Qualitative methods help identify these constraints and suggest ways in which policy and communication efforts can be channeled to generate wider acceptance of reforms. Box 1 highlights some examples of the ways in which mixed methods have helped improve knowledge of energy tariff reform impacts in ECA.

12. This report distills crosscutting messages from the eight ECA countries where qualitative research was carried out in 2013–2014, and includes some information from prior qualitative research on the same topic conducted in Serbia and Albania. The findings represent perspectives of low- and middle-income groups, where low-income respondents represent roughly the poorest 40 percent in each country, and middle-income groups represent the third wealth quintile. Despite differences in context, as well as across groups (for example, consumers who use different energy sources, live in different locations, and so on), there are strong similarities in perspectives regarding household vulnerabilities, coping measures, and attitudes toward sector reforms and mitigation policies. This report presents findings that are comparable across the states in the region, as well as some contextual nuances that reflect the unique country context and stage of reform. The report therefore presents regionwide recommendations, while summaries of country reports with more specific recommendations are presented as an annex.

EVIDENCE

13. The findings are based primarily on qualitative research—focus groups (FGs) and

key informant and ethnographic interviews.

A total of 208 FGs (with approximately 1,650 citizens), and 118 in-depth interviews (with energy, civil society, and social protection experts, and ethnographic interviews in households) were conducted across the eight countries. Samples of FGDs conducted in each country are presented in Annex II. Where relevant, the report also presents recent data from household surveys to validate and/or complement qualitative evidence.

14. To obtain the data presented in this report, local firms were hired to conduct FGs and interviews in each respective country. FGs were designed to obtain the perspectives of individuals who use different energy sources, who live in different location types (cities, small towns, and rural areas), and in different geographic parts of a country. Separate groups were also included with representatives of ethnic minorities. Some groups included only individuals who benefit from social assistance. In the majority of countries, separate FGs were held with men and with women.

15. The research included approximately 14 interviews with key informants in each country.

These interviews were designed to complement and balance views expressed by households. Representatives of energy companies, civil society representatives, social assistance employees, and local or community leaders were interviewed as part of this work. In addition, 3–4 ethnographic interviews per country were conducted in some of the countries to illustrate how households cope with tariff increases.

STRUCTURE OF THE REPORT

16. This report presents findings in three main areas: household vulnerability, coping

mechanisms, and drivers of acceptability of and opposition to reforms. **Chapter II** presents some factors that make certain households more vulnerable to reforms. **Chapter III** discusses how households cope with energy price increases. **Chapter IV** discusses experience with and attitudes toward energy-efficiency measures and energy-saving behaviors. **Chapter V** presents respondents' experience with social assistance and describes the need to design more

comprehensive mitigation measures. **Chapter VI** describes governance and accountability concerns regarding energy providers, and in the energy sector overall, that influence whether people accept or oppose the reforms. **Chapter VII** summarizes policy implications that arise from the qualitative research for improving the affordability, acceptability, and communications about the reforms.

II. HOUSEHOLD VULNERABILITY TO ENERGY TARIFF INCREASES

The impacts of rising energy tariffs on households depend on a variety of factors. These include household income and income security, the type of energy source used, the household's location and ability to substitute energy sources, the type of housing, and the availability and cost of energy-efficiency measures. Urban households are often more directly affected by the elimination of subsidies for gas and district heating, since they use these sources more often. At the same time, poor rural households also face an overall high energy burden. Although they are not affected by district heating tariff increases, rural and semiurban households are often hit harder by increased electricity prices, as they may use electricity more intensively to heat water, for house plot irrigation, and as a supplementary heating source. In all countries, certain social groups, such as elderly, single-parent households, and ethnic minorities, seem to be more vulnerable to energy tariff increases than others.

17. In Europe and Central Asia, heating often represents the highest household energy expense, and consequently, the winter season is the most stressful period in terms of energy expenses. People spend more on energy in the winter than during other times of the year, and expenses can vary depending on if it is a colder winter than usual, as well as the type of fuel used. Figure 1 illustrates differences in spending during the heating and nonheating season in Tajikistan. FGDs in all sample countries confirm that the winter months (December–February) pose the greatest burden on the household budget in terms of energy expenses.⁶

⁶ Note that household budget surveys do not always capture these seasonal differences in spending,

18. Households use a variety of energy sources for heating. Urban and semiurban households are more likely to rely on utility services such as gas and electricity for their energy needs, and are also more likely to have access to district heating.⁷ Rural households, on the other hand,

reporting instead annual averages. In Tajikistan a special energy module was commissioned in 2013, which separated questions on “heating” and “nonheating” season energy consumption, which made it possible to see the variation. This survey also took collected fuels (brushwood, manure, cotton stalks) into account when calculating energy consumption, which made it possible to acknowledge rural households’ high burden to procure energy sources.

⁷ District heating is a central heating network that supplies heat and hot water to a dwelling, usually apartment buildings in large urban centers. District heating is produced using gas or coal so its cost can be directly influenced by the price of these fuels.

more frequently rely on wood, coal, and biomass fuels for heating as well as a wide range of household activities such as cooking and heating water. Rural populations may experience greater difficulties with electricity supply, including power cuts, more often than those living in urban areas. Box 2 summarizes some important cross-country variations in the energy sources available to households across the region.

19. The type of energy sources used for heat largely determines the impact of a specific tariff increase on a household. Abolishing gas and electricity subsidies affects urban and semiurban households that use gas- and electricity-based heating more than rural households. District heating users in particular are likely to face a steep increase in costs as

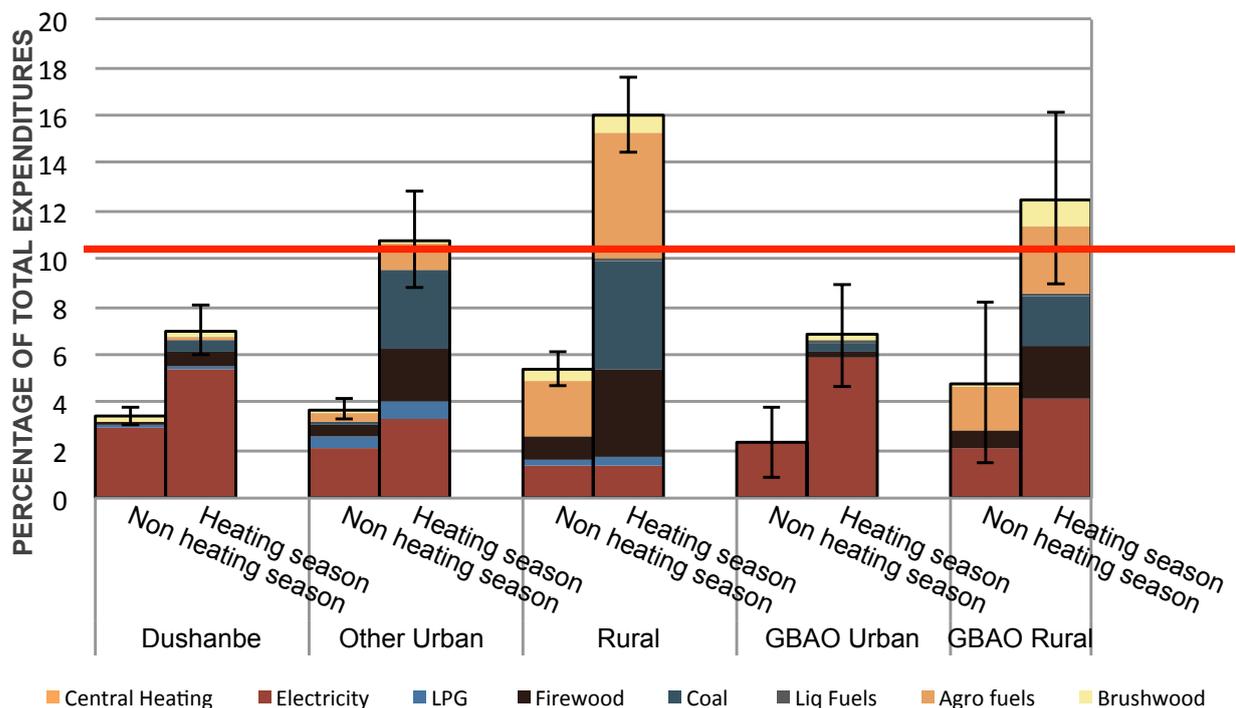
a result of reforms.⁸ However, the impacts on rural households that use wood and coal are not negligible. These sources of energy are often traded and their price fluctuates together with electricity and gas tariff increases, as reported in FGDs in Armenia.

20. The impacts of electricity tariff increases are broad and are not always related to heating.

Rural and small-town households use electricity intensely for heating homes and water. For these households, electric boilers are often the only source of hot water through the year, and

⁸ This is because district heating tariffs are some of the most heavily subsidized, so the increase means that tariffs will be very high when subsidies are removed. Of course, this can vary significantly from one country to the next; the degree of tariff increase may also vary substantially across cities in the same country.

FIGURE 1. TAJIKISTAN: PROPORTION OF TOTAL HOUSEHOLD CONSUMPTION SPENT ON ENERGY PER SEASON AND BY LOCATION



Source: World Bank staff, based on data from the Central Asia Longitudinal Inclusive Society Survey (CALISS), 2013; from World Bank. 2014. "Assessment of Household Energy Deprivation in Tajikistan" World Bank, Washington DC

BOX 2. VARIATIONS IN ENERGY SOURCES USED BY COUNTRY

The energy use patterns described above are true for most countries in the region—urban households use gas or district heating for heat, networked or bottled gas and electricity for cooking, and electricity for lighting and powering appliances; small-town and rural households use either electricity, or wood, coal, and biomass fuels for heating and cooking and electricity for lighting and appliances.

Infrastructure developments and resource availability, both domestic and imported, account for some differences across countries or regions. In Kyrgyzstan and northern Tajikistan, the wider availability of coal makes it a preferred heating and cooking source in rural areas; in most of the region's other countries, however, wood is the primary fuel in rural and semiurban locations. In Tajikistan, due to political tensions with Uzbekistan, networked gas is no longer used for heating or cooking; with the exception of a small minority of apartments in the capital, the district heating network has stopped operating in most areas due to unavailability of gas and the resources needed to maintain the network. As a result, urban Tajik households rely almost exclusively on electricity for all household needs. Similarly, the southern region of Croatia has relied primarily on electricity for heating and cooling, as the gas network does not cover this region extensively, and firewood is not as readily available in this part of the country. In Bulgaria, networked gas covers a minority of household consumers, and is therefore rarely used as a heating source.



these account for a large portion of electricity consumption. Moreover, poorer households often use older and inefficient appliances, which consume more electricity. Electricity is also commonly used as a supplementary heating source. Even households connected to central heating networks report using electricity during cold days before and after the heating season.

21. Electricity is also essential for livelihood activities such as irrigation and refrigerating

self-produced food.⁹ Rural households in Armenia, Bulgaria, the Kyrgyz Republic, and Romania mention that relying on self-produced food allows them to save cash income earned in the summer for buying wood or coal for heating in the winter. In Armenia, households state that they cut down on this type of food production when electricity prices rise, as they can no

⁹ Quantitative data for Bulgaria also show that the poorest quintiles spend the highest proportion of their income on electricity.

longer afford to preserve food for winter. In Turkey's southeastern region, where agriculture is the main source of income in rural areas, electricity-powered water pumps are commonly used for irrigation, so increases in the price of electricity affect agricultural incomes and ability to pay bills during irrigation season.

22. Within each country, certain groups were found to be especially vulnerable to energy price increases due to their socioeconomic status and/or inferior living conditions. In Armenia, low-income residents of the 1988 earthquake zone are among the hardest hit by price increases (see Box 4), while in Tajikistan, single mothers without remittances were reported to be an especially vulnerable population group (see Box 5). In Bulgaria, Romania, and Croatia, the Roma population is generally highly vulnerable to price increases due to the higher prevalence of informal and insecure income among Roma, and a more widespread perception among Roma respondents of experiencing discrimination in accessing social assistance (see Box 6). In Turkey, farmers, nonsalaried urban workers, and small-scale businesses were most impacted by electricity price increases.

ENERGY AFFORDABILITY AND INCOME SECURITY

23. Households without stable incomes have more difficulty coping with rising energy prices. Households in which the main breadwinner is unemployed, works seasonally, or has migrated find it harder to cope with increasing tariffs. Income insecurity directly affects the ability to pay for energy; it also influences households' ability to access social assistance and plays a role in citizens' attitudes toward and acceptance of reforms.

24. Households that rely exclusively on remittances can easily lose their income when the migrant in their household faces difficulties or decides to permanently cut connections with their family. For example, in Tajikistan, where remittances comprise a significant share of cash incomes in rural and small urban areas (see Boxes 3 and 5), a household's ability to make energy payments is largely determined by whether someone in the household has migrated and is sending back remittances. Households with no migrants (for example, elderly persons who have no sons of working age), ones in which migrants have been injured and returned home, or households that have been "abandoned" by migrants¹⁰—mostly female-headed households—are at a greater risk of falling behind on energy payments or being unable to procure fuels for the winter.

25. Roma households across different countries are more likely than non-Roma households to have insecure incomes, making this group particularly vulnerable to energy increases. Roma often obtain jobs as seasonal or informal workers. Partly because of this they are also more likely to purchase fuel in small quantities throughout the year; because buying in bulk saves money, buying in small quantities increases the overall price they pay. Many Roma respondents in Bulgaria, Romania, and Croatia also note that they face difficulties accessing social assistance because those reviewing

10 About 95 percent of Tajik labor migrants are men and almost 80 percent of them are married with children (Khakimov and Mahmadbekov, 2009). An International Organization for Migration (IOM) (Khakimov and Mahmadbekov, 2009) study estimates that up to one-third of labor migrants may settle permanently in the host country and gradually stop sending remittances home. The majority of FG respondents in Tajikistan mentioned the "abandoned" families of migrants as one of the most vulnerable categories of households.

BOX 3. THE IMPORTANCE OF REMITTANCES FOR ENERGY AFFORDABILITY IN TAJIKISTAN: EXAMPLES FROM ETHNOGRAPHIC INTERVIEWS

Sarband. Sarband is a small urban area in Khatlon province of Tajikistan. The income of this four-member household (which includes a husband, a wife, a two-year-old daughter, and a grandfather) consists of the wife's salary as a janitor at the local school and the grandfather's pension. The husband, an accountant by training, was the family's main earner until 2012, when he was laid off due to budget cuts. He borrowed money from friends and relatives and went to Moscow to work in a beer factory. In his first 10 days on the job he hurt his arm and was unable to continue working. He returned to Tajikistan, working occasional jobs. He is unwilling to return to Russia, as this would require significant investment in travel costs with no guarantee that he can earn more. With the loss of his salary and no remittances, the family's expenses for energy and other utilities (water, garbage collection) now reach 43 percent of their income in the summer months and 96 percent of their income in the winter months. To cope with this burden, the family borrows food from a local shop, negotiates with electricity controllers to delay payments, and has sold valuables such as the wife's gold jewelry.

Dushanbe. The family lives in an apartment in Dushanbe, the capital city of Tajikistan. The household consists of an elderly couple, their two sons, two daughters-in-law, and grandchildren (other sons and daughters live in separate households). The household relies primarily on remittances from the two sons, who work in Moscow (approximately 1,944 Tajik Somoni/month), and on the disability pension of the father (400 Tajik Somoni/month). In 2012 the father underwent foot surgery, which significantly strained the family budget. The sons returned to Dushanbe to take care of their father and stayed for four months, foregoing their earnings in Russia. Due to their location and the fact that they live in an apartment building, electricity is the household's only source of energy. Usually electricity bills comprise 2 and 7 percent of their monthly budget in summer and winter, respectively. However, due to medical expenses and loss of remittances this past winter, they have exceeded the family's capacity to pay on time. The household has had to negotiate with controllers to delay payments in order to avoid disconnection. The family has also significantly reduced food expenses, mainly on meat, to be able to pay their electricity bills.



applications assume that these applicants have undeclared incomes. In Romania, Roma women report that the success of their social assistance application may hinge on whether they are able to persuade the social assistance officer that they do not have other sources of income.

26. Relying on seasonal and insecure employment is another factor that affects vulnerability to energy price increases. In Bulgaria, all male respondents from a rural settlement in the sample reported relying on seasonal income from construction. All of these households report difficulties maintaining eligibility for social assistance because they are not consistently registered with the state employment agency—which is a requirement for

receiving benefits—or because their earnings fluctuate frequently. Roma households across the sample face the same challenge, as they are more likely than non-Roma to hold seasonal or informal jobs. Households across the sample that have experienced a job loss or report a reduction in hours and salary in recent years (possibly due to the financial crisis) find it increasingly difficult to cope with energy expenses.

27. Lastly, income security matters, because—as FGDs reveal—consumers tend to judge their ability to cope with energy price increases based mainly on stable sources of income. When asked to estimate the share of their income spent on energy, FG respondents tend to provide estimates that are notably higher than

BOX 4. THE 1988 EARTHQUAKE ZONE IN ARMENIA

In Armenia, low-income residents of the 1988 earthquake zone are among the most vulnerable consumers. This group faces high levels of overall poverty and income insecurity. Many men from the area have migrated to find work, resulting in a large number of female-headed households with scarce employment opportunities and access to land. The condition of some of the dwellings makes it difficult to apply effective energy-efficiency measures. Respondents from Shirak and Lori, the two regions most affected by the earthquake, still live in temporary housing that was constructed by the government following the earthquake. These houses are poorly insulated and residents commonly use basic but inefficient insulation methods, such as taping off windows, vents, and doors, and placing extra rugs on the floor and walls. As a female respondent from Lori states, “It seems we live outdoors; wind is in the house, rain is in the house.” Moreover, residents in these settlements almost exclusively rely on electricity, as their houses are not connected to the gas network and poor ventilation and degraded building structure make it dangerous to use stoves to burn wood and manure. Thus, while many groups in the country would be strongly affected by rising energy costs, these households are expected to be exceptionally vulnerable due to their already challenging socioeconomic status and living conditions.



the average provided in the country's household budget surveys. In Tajikistan, Armenia, Bulgaria, and Romania, FG respondents estimate spending between 30 and 90 percent of their income on energy in the winter season.¹¹ Moderators

11 These differ according to the region, dwelling, size of household, and so on. For example in Vratsa, Bulgaria,

observe that these estimates may be inflated because the respondents tend to consider

where district heating tariffs are among the highest in the country, respondents report spending half of their incomes on district heating and electricity; the relative share of district heating and electricity expenses reported in other towns outside the capital (Pernik, Plovdiv) is also high (12–15 percent) compared to those reported in Sofia and Pleven (3–6 percent).

BOX 5. MOST VULNERABLE POPULATION GROUPS IN TAJIKISTAN

In Tajikistan, some population groups are especially vulnerable to high energy expenses due to their level of income. These groups include single mothers (especially those without remittance income), large families, pensioners who live alone without family support, people with disabilities, and doctors and teachers in rural areas. The majority of FG respondents mention that urban and rural single mothers are the most vulnerable groups. The number of female-headed households has increased due to growing numbers of men who migrate to Russia (and Kazakhstan) for work and abandon their families at home. Female heads of household often have little education, few marketable skills, and several children to support. Female-headed households live in poor conditions and do not receive extended family support.

Respondents also mention that large families are vulnerable to high energy costs. Traditional Tajik families usually have more than three children, which increases household expenses and makes it more difficult to afford energy. Elderly men and women who are no longer employed, or men and women with disabilities, are also vulnerable to high energy costs. Pensions are not enough to cover all basic needs. According to Tajik social norms, after marriage, women live with their in-laws and contribute to their husbands' extended families; they are rarely allowed to help their own elderly or sick parents. Therefore, respondents frequently note that pensioners and people with disabilities who have only daughters, or no children, face more difficulties meeting daily needs. In rural areas, doctors and teachers, despite their professional credentials, are also among the most vulnerable population groups. These groups receive very low salaries, lack farming income, and have few opportunities to earn extra income sources in rural areas. As a result, they have difficulty paying for energy.



BOX 6. THE ROMA POPULATION IN BULGARIA, ROMANIA, AND CROATIA

In Bulgaria, Romania, and Croatia, marginalized Roma report greater difficulties in coping with energy expenses. Roma respondents in Bulgaria estimate that they spend between 50 and 70 percent of their income on energy expenses—much more than non-Roma respondents. Marginalized Roma across the sample state they often purchase firewood in small quantities through the winter, which results in a higher price overall. They also tend to purchase or collect lower quality fuels; buy cheaper wood scraps instead of higher-quality wood; collect wood pallets from construction sites and old furniture from dumpsters; or regularly burn used diapers and other waste materials that do not provide adequate heating but generate harmful fumes in the house. Marginalized Roma often live in dwellings that are poorly insulated, which further prevents them from adequately heating their homes.

The Roma also consider themselves particularly vulnerable to tariff increases in part due to ethnic discrimination they experience from social assistance offices and in the labor market. In Croatia, Roma claim that they experience discrimination when applying for social assistance. They find themselves visiting social care centers several times and filing additional forms, yet are still ultimately rejected for assistance. Roma also often work seasonally, which limits their access to social assistance. Roma women also state that their vulnerability comes partly from the fact that their families are larger than non-Roma families.



only their stable sources of income (salaries, pensions) and do not factor in the value of self-produced food or seasonal work. Those who primarily rely on seasonal work or other less stable sources of income are constantly aware of the fact that they may not be able to afford their next energy bill, and hence feel less secure at the prospect of rising tariffs.

28. Households that are not easily able to switch between energy sources for heating are more vulnerable when tariffs rise. Urban apartment dwellers are often most constrained in switching to cheaper sources, either because they are unable to unsubscribe from district heating services; because they lack the ability to access or store solid fuels; or for structural and safety



Household storing wood on apartment balcony, Armenia.

reasons, such as living in an apartment that lacks chimneys.

29. Most respondents state that they have considered or started using cheaper sources of energy. Those who have substituted district heating for gas or electricity do not enjoy much savings, because the cost of these sources is also growing. For example, apartment residents in Bulgaria report that they have tried to turn down the level of central heating and use electric heaters to reduce their district heating bill, but have found this results in high electricity bills and only small reductions in district heating bills. Other respondents in Bulgaria described collectively deciding to disconnect from district heating and installing independent gas heating in their buildings, but are now uncertain whether they will recover the cost of their investment, since gas prices are also increasing.

30. High up-front expenses make switching between energy sources unaffordable for some groups. In Romania, legal changes and the availability of networked gas infrastructure have made it possible for customers to disconnect from district heating and install independently metered gas heating. Utility data in Romania suggest that the rate of disconnection from

district heating has reflected the scale of tariff increase in district heating in the respective region. In Reși a, where district heating tariffs increased by 100 percent between 2010 and 2013, over half (58 percent) of district heating subscribers have opted to disconnect; the rate of disconnection has been lower in other locations where tariffs have not grown at such a high rate.¹² However, switching away from district heating entails a large up-front cost, which makes the switch difficult for the poor. Moreover, as more households choose to disconnect, the cost of district heating for those that remain connected grows and increases the pressure for them to switch.

31. Rural households report a long-term trend of switching from heating with gas or electricity to wood or coal. In the past two decades, with the gradual rise of gas and electricity tariffs, rural households have increasingly switched to heating and, when possible, cooking with solid fuels, such as wood and coal. Solid fuels are more affordable though less convenient due to the need to transport, chop, and store them. They are also more harmful to human health (because of the indoor smoke they generate), and necessitate more frequent household repairs to address damage to walls from smoke, chimney repairs, and so on. Poor rural households have increased their reliance on collected sources such as brushwood, manure, and agricultural byproducts. Many such sources do not have a cash value but require time and effort to collect.

32. To conclude, household vulnerability to energy subsidy removal is affected by a range of factors. Urban residents are often more vulnerable due to their inability to

¹² According to Metro Media Transilvania, based on data provided by the National Regulatory Authority for Local Public Services.

switch to cheaper sources of heating such as wood, coal, and biofuels. Switching to cheaper or independent heating sources, for which they can more easily regulate consumption, may also be unaffordable for the urban poor. At the same time, rural and semiurban residents are vulnerable due to their more intensive use of electricity for heating, hot water, and livelihood activities.

Due to low or insecure incomes, energy affordability may be more challenging for poor rural households, minorities, and the elderly, among others. The complexity of channels through which different household groups are affected by the elimination of subsidies calls for broader and more flexible mitigation measures and support for positive coping strategies.

III. COPING WITH ENERGY PAYMENTS

Due to limited ability to change energy sources and consumption patterns, energy tariff increases affect basic aspects of well-being such as nutrition, health, and comfort. Both low- and middle-income groups experience these impacts, with outcomes being starker for the poor. Poor and rural residents have a more limited range of coping strategies and are more constrained in their ability to employ energy-efficiency measures due to a lack of information and financial barriers. Their ability to save energy without encroaching on basic necessities—especially for the poor—is limited.

33. Households consider energy to be one of their most basic expenses, and use various coping strategies to afford rising costs. These coping mechanisms are used by a wide variety of social groups, including the poor and the middle classes.¹³ Respondents in this research most often mentioned reducing spending on food and delaying bill payment as ways to cope with increasing energy prices. Other strategies, such as not buying clothing and electrical household appliances, reducing travel, and not attending social gatherings and traditional celebrations were also frequently mentioned, and impact well-being. Certain social groups in some countries also borrow money from friends, relatives, or financial institutions.

¹³ Note that in this research, “low-income” groups were recruited to represent the bottom two quintiles and “middle-income” groups were recruited to represent the third quintile.

34. When energy prices rise, more than 90 percent of respondents mention cutting spending on food as a primary coping strategy. This was the case across countries and across social groups within each country. For the poorest groups, cutting food spending means reducing the number of meals consumed and consuming less meat and other proteins. Middle-income households, on the other hand, buy lower quality foods and cut down on nonessential food and drink. Rural households mention that they often rely on self-produced food to save cash for energy expenses. Households with children report it is more difficult for them to cut food expenses, since they prioritize providing warm meals for their children. Such households may resort more often to delaying energy payments and borrowing money. Reducing food expenses is seen as a direct consequence of higher energy costs.

"I spend my pension on three things: the water bill, the electricity bill, and food. If the electricity bill goes up, I have less for food."

—LOW-INCOME WOMAN
RURAL AREA, BULGARIA

"We want to eat meat at least once a week, but we cannot. Even if I starve I have to pay for gas and power."

—LOW-INCOME WOMAN
RURAL AREA, ARMENIA

"I would rather starve than live in a cold house; heating is very important. The dwelling must be warm all the time, hence the bills must always be paid on time."

—LOW-INCOME MAN
URBAN/MOUNTAINOUS AREA, KYRGYZSTAN

"We eat less to pay the bills."

—LOW-INCOME WOMAN
URBAN, TURKEY

"Our electricity bill is 20–30 TRY [Turkish lira] but we cannot pay on time. By saving on food expenditures I pay the bills when I can."

—LOW-INCOME WOMAN, SOCIAL ASSISTANCE
RECIPIENT, URBAN, TURKEY

35. Poor households (and to some extent middle-income ones) reduce the amount of energy used in the household to be able to afford energy bills. A common winter method for reducing energy use is to heat just one room in the house. This is most common for people who live alone, but has been cited as a strategy for families and extended families in Tajikistan and Armenia, and for low-income households in Kyrgyzstan. In Armenia, 40 percent of respondents report changing their sleeping and bathing patterns during the winter. Respondents in these countries also state that they avoid spending time at home to save on heating expenses. Using fewer appliances is another method for saving; in Romania, one-third of urban middle-income respondents report using a broom instead of a vacuum cleaner, washing clothes by hand, and reducing the use of coffee machines, microwaves, and other small appliances. About 7 percent of all FG respondents in Romania also mention unplugging the refrigerator during the winter and keeping food outside. Energy use is monitored carefully and wasting energy contributes to household conflicts.

"Every day we quarrel about electricity: 'What did you switch on, why, what did you do?'"

—LOW-INCOME WOMAN
URBAN AREA, BULGARIA

"Maybe we don't heat for us, but we should heat for guests, because they don't come frequently."

—LOW-INCOME WOMAN
RURAL AREA, ARMENIA

“All the time
we have to wear wool
slippers, vests, sometimes
I even put on a hat.”

—MIDDLE-INCOME WOMAN
URBAN AREA, BULGARIA

36. Households also reduce spending on health care by avoiding doctor visits and practicing self-treatment. In Armenia, rural FG participants state that they reduced medical expenses by not going to hospitals, and even avoided calling an ambulance when one was needed. Respondents mention that spending on health become less of a priority because of economic hardship. In Bulgaria, some elderly people reported skipping nonessential medicines and dental work due to the high cost. In Romania, some households mentioned avoiding doctor visits in the winter and postponing necessary medical tests to the summer months, when the expense will not compete with high heating bills.

37. Respondents also report trying to save on expenses such as clothing, travel, transportation, child care, and telephone use, although these measures are not always taken as a response to energy prices. For example, most low-income participants in the study share that they had stopped buying new clothes for themselves a long time ago, and only buy clothes for their children, often from secondhand stores. In Croatia, urban respondents mention not using personal cars or even public transportation, but walking and biking instead to save on gas and transport fares. They relate these measures to the overall increase in prices related to EU accession. Urban residents in Tajikistan frequently mention keeping mobile phone bills

low by having others call them. In Armenia, rural and urban respondents report that they cut spending on children's education and daycare.

“See how old
my clothes are,
we don't even
remember when we
bought new clothes.”

—LOW-INCOME MAN
RURAL AREA, ARMENIA

38. Social isolation is cited as a particularly negative result of increasing energy prices, as respondents state that they cannot afford to attend social gatherings and traditional celebrations. In Eastern European countries (Bulgaria, Romania, Croatia, Armenia) this is mostly expressed as an inability to meet friends out, invite guests over, or to be a guest. Younger respondents also mention that weddings (which are common among friends and peers at this stage in their lives) are an unexpected expense that puts pressure on their finances. In Central Asia (Tajikistan, Kyrgyzstan) respondents refer more frequently to cultural traditions such as *tois* in Kyrgyzstan.¹⁴ In Tajikistan, most groups (low and middle-income) reported selling or not buying gold jewelry (a traditional gift given to daughters for their weddings) as a coping strategy to meet energy expenses. However, in some groups these topics sparked heated discussions because some respondents maintained that if one has a daughter, expenses such as weddings cannot be avoided. Keeping such traditions and having social interactions are important for building and maintaining social capital.

14 A *toi* is a traditional celebration for various occasions, such as a wedding or the birth of a child.

“I think that, at our age, unexpected expenses occur. Even the price of the bus pass increased. Just not to mention a month we have to attend 2–3 weddings.”

—MIDDLE-INCOME MAN
URBAN AREA, ROMANIA

“Once, we sent money as a present for the toi, but did not go there to save travel costs.”

—LOW-INCOME WOMAN
URBAN AREA, KYRGYZSTAN

39. Borrowing money is generally a last-resort coping strategy that is employed to a varying degree across countries. In Belarus and Armenia less than a tenth of respondents mention borrowing money as a coping strategy. Borrowing money is least common in Tajikistan, although extended families there are more likely to live together and thus save or share energy expenses. In Albania, borrowing is so widespread that it is a way of life for many, and particularly for social assistance beneficiaries who feel trapped in a never-ending spiral of debt. In Bulgaria, Romania, and Croatia, respondents stated that they borrow both from friends and financial institutions such as credit unions. Some rural households and Roma in Romania and Bulgaria report buying food on credit at local stores as a regular monthly strategy.

40. The scope of available strategies may vary across locations and genders, with urban respondents reporting that they employ a wider

range of coping mechanisms, and men and women reporting different coping mechanisms. Urban dwellers more often mention cutting back on mobile phone communications, using bicycles instead of cars or public transport, finding additional jobs, and negotiating gas or electricity payments with the utility company; rural households, meanwhile, report a more limited set of coping measures. Gender differences are often found in the perceived ability to increase one's income in order to cope with larger expenses for basic needs such as energy. Men believe they are capable of finding additional and part-time employment to offset additional energy costs. Women are less likely to mention finding additional work as a coping strategy, and more likely to proactively seek social assistance. Some women, however, do mention seeking part-time jobs as caretakers, taking up knitting projects, selling crafts or other products at the market, and so on.

41. The level of impact of these strategies on well-being also differs across income groups and gender. As mentioned above, the poorest groups reduce food spending, which directly affects their basic nutrition needs, though for middle-income households the impacts can be more marginal. Similarly, for the lower-income households, saving energy may result in inadequate heating, or heating small spaces during the winter and being forced to share crowded conditions with extended family. Women's coping strategies are often more of an imposition on their daily lives. Women who stay at home are more affected by reduced heat during the day. As women are more often responsible for household chores such as cleaning, washing, and cooking, they also are more impacted by using household appliances more sparingly. In countries such as Croatia and Bulgaria, a common energy-saving strategy is to use energy at night when the rate is lower. Women are more likely to report being

impacted by this strategy, as they have to stay up late to do more energy-intensive housework.

NONPAYMENT AND PAYMENT DELAYS

42. Payment delays are the second-most widespread coping strategy mentioned by study respondents. However, payment delays are also reported as a strategy of last resort, one that causes stress and imposes a further financial cost (in penalty fees). As mentioned above, energy services—for heating but also for lighting, cooking, heating water, and other household needs—are seen as essential. Being disconnected from electricity or gas is considered a household crisis. Therefore, most households avoid being disconnected from energy utilities or being left without solid fuels for heating at all costs.

“I’d rather face hunger than not pay the bills. I’m afraid they will disconnect me....

It’s very expensive to be reconnected. Also, it’s much more difficult to have to pay two bills in one month. I’d rather go buy bread and sugar on debt.”

—LOW-INCOME WOMAN
RURAL AREA, ROMANIA

“I was once disconnected. They got the house wired up again all right after I paid them. But I slaved on an entire month just to pay the bill and the reconnection charges.”

—LOW-INCOME MAN,
RURAL AREA, ROMANIA

43. Nevertheless, a high proportion of low- and middle-income groups in the sample note that they have no choice but to delay payments. In Bulgaria, one in five respondents in the study, of all group categories, noted that they must regularly delay bill payments. In Romania, about 40 percent of FG respondents need to delay payments at some point during the year. This is most common in the heating season when bills are significantly higher. It is also more common among district heating users, who cannot be easily disconnected from the network. In Bulgaria, poor urban households often pay off their winter district heating bills throughout the summer. Even though they face penalty fees for this, they prefer this option to having the energy company send them equalized bills throughout the entire year, because they feel there is less opportunity for their bill to be manipulated and because they would rather face the stress of receiving high bills only half of the year. In southeastern Turkey, respondents who delay their payments complain about high interest charges that they do not fully understand. The thought of paying interest charges further angers them, considering that most of the households in the region use electricity illegally and do not pay bills at all.

44. Households that are more reliant on gas and electricity are less able to delay payments as a coping strategy. Their service may get disconnected within a short period after nonpayment, and reconnecting may be costly and time consuming. Those households more often report waiting until the last possible day to pay the bill, or negotiating with controllers to pay the bill in parts. The latter is common in rural areas and some urban areas (such as in Tajikistan) where bill collection is done in person by controllers who go house-to-house. In Bulgaria, the fact that district heating

households can delay payment longer than those that heat with gas is perceived as unjust.

“We are discriminated here because we are immediately cut off, and you in Sofia could not pay for years. This is why the price of gas is high: you in Sofia do not pay for district heating, district heating companies have debts to Bulgargaz and they increase the prices to cover losses.”

—MIDDLE-INCOME MAN
SMALL TOWN, BULGARIA

45. For the reasons mentioned above, nonpayment is uncharacteristic of most households. When nonpayment occurs on a larger scale, it is generally caused by specific regional characteristics. For example, ethnic and political tensions in the predominantly Kurdish populated southeastern region of Turkey have contributed to more widespread nonpayment behavior that reflects not only poverty but also a set of accumulated grievances against the government and electricity providers (see Box 7). Prior qualitative research conducted in Albania and Serbia also reveals some cases in which nonpayment has become widespread in some communities (see Boxes 8 and 9).

BOX 7. NONPAYMENT IN SOUTHEASTERN TURKEY

Conflict and tension in southeastern Turkey, where the majority of population is Kurdish, caused citizens to not pay electricity bills and the government to not invest in electricity infrastructure in the region prior to privatization. At 70 percent, southeastern Turkey had the highest electricity nonpayment and loss rates in the country at the time of privatization. Reasons for such rates are inadequate and inefficient infrastructure; inability to pay; outstanding debts; dissatisfaction with the electricity service; weak relations between the citizens and the state; and learned behaviors. The distribution company does not calculate payment and loss rates separately however; they both fall under the category of “unaccounted electricity.” Key informants argue that because of the region’s inefficient infrastructure, some of the losses are caused by system deficiencies, and consumers alone should not be held responsible for high loss rates. Nevertheless, in the consumer satisfaction survey, 30 percent of respondents indicated that they know someone in their close environment who does not pay their electricity bills regularly or who uses electricity illegally. Illegal electricity use includes various illicit actions. Low-income households use techniques

such as placing the meter inside homes where distribution company staff cannot read it. Industries and small-scale businesses use more sophisticated methods such as stopping or slowing down electronic meters and installing software to manipulate meter readings. FGDs and key informant interviews reveal that the industrial sector and regional small businesses are the most prominent users of unpaid electricity. Respondents mention that business owners bribe energy company employees to avoid fines for illegally using electricity and nonpayment. A respondent working in the industrial sector points out that “when an employee from the service provider comes to read the meter, he gets a bribe from my boss.” According to the consumer survey results, learned behaviors and the idea of not being obliged to pay are also important reasons for nonpayment in commercial communities.

Many households in the southeastern region use electricity as a primary or a supplementary source of heating. Electricity is also used throughout the year to heat water. Poor households use electricity for cooking and switch to portable gas only when electricity is not available. More than half of the respondents report that the inability to pay is the primary reason for nonpayment. As a respondent from Sanliurfa states, “The problem is lack of economic means and low income. How can somebody working for a minimum wage pay for high electricity bills?” In rural areas, 92 percent of respondents believe that people do not have the financial resources to pay for energy expenses. Rural residents often use electricity for agricultural irrigation, which is highly expensive. For that reason, most of the farmers use electricity illegally and the number of unsubscribed irrigation wells in the region is high. According to the electricity distribution company, 95 percent of farmers in the southeastern region use electricity they do not pay for; 49 percent of the population works in agriculture, making it the main source of income in the region. The Southeastern Anatolia Project (GAP in its Turkish acronym), a regional development project comprised of irrigation and energy projects, has mainly benefited large landowners who were able to increase their yield with irrigation opportunities heralded by GAP. However, more than half of the irrigation projects were not realized, and farmers without a formal system of irrigation were left with the option of using electricity for pumped water irrigation. As a farmer from Sanliurfa states, “A farmer receives electricity bills of 50 thousand TRY more or less for a well. If he manages to harvest 50–60 tons of cotton, he can only earn 25–30 thousand TRY for this. How could he pay the bill?” During FGDs, rural respondents emphasized that they are unable to pay for electricity due to high bills that result from the accumulation of debts. As a respondent from Mardin said, “I would be ready to be imprisoned for ten months only if I knew that my debt was going to be cleared.” Eighty-eight percent of rural respondents indicate that restructuring the debt payments and installment plans would prevent illegal use. Rural respondents also suggest establishing fixed prices per irrigation well according to the size of the irrigated area and power of transformers.

In the consumer survey, 64 percent of rural households and 26 percent of urban households indicate that dissatisfaction with the electricity service is the second most important reason for nonpayment. During FGDs, respondents complain about voltage fluctuations and unexpected power outages.

The region’s political context has also contributed to nonpayment. Southeastern Anatolia has suffered from a protracted conflict situation, which has resulted in a lack of trust between citizens and the government and low levels of infrastructure investment. Key informants suggest that there are politicized neighborhoods in the region, where citizens kept the distribution company staff away and fought against forced connections.

Residents of these areas argue that they have been treated as “second class citizens” by the state, and have received low-quality services for many decades. Residents believe they are entitled to free electricity.

FGDs also revealed growing conflicts between the groups that pay for electricity and those that do not. Resentment toward nonpayers is particularly common in new urban communities built next to or within existing pockets of poverty. Payers state they carry the burden of nonpayers.

BOX 8. NONPAYMENT IN ALBANIA

In Albania, the electricity provider identified low collection rates as an important problem and stated it is committed to fighting against nonpayment “without any tolerance.” Consumers who do not pay their bills risk being disconnected. However, according to qualitative research findings, the electricity company struggles to enforce payments due to the dire situation of poor households. As a female nonpayer from Milot puts it, “[The electricity company] knows that we don’t even have money to buy bread.”

The primary reported reason for nonpayment in Albania is the inability to pay. During FGDs, respondents stated that they cannot afford to pay for electricity due to unemployment and the inability to cope with basic needs such as buying clothing and school supplies for their children. As a female nonpayer from Rashbull put it, “Whoever is concerned about being able or not to produce daily bread doesn’t care about paying for electricity.” Beneficiaries of social assistance point out that their monthly electricity bills and spending on wood and gas exceed the monthly cash assistance they receive. Respondents suggest that increasing cash assistance, even in small amounts, would help poor families pay their electricity bills. A female nonpayer from Milot said, “I would only start paying for the electricity if the government gave my family US\$300 per month as cash assistance.” The belief that electricity should be free to poor people is common among nonpayers, who argue that the state has failed to help poor households and that social assistance mechanisms are insufficient to cover essential expenses.

Respondents also mention the sector’s accountability failures as a reason for nonpayment. The prevailing feeling among nonpayers is that they are “being cheated” by the electricity company. Nonpayers argue they are charged more than the actual quantity of electricity they consume. As most of the respondents have limited access to their meters, they believe their meters are not accurately read. A female payer from Milot stated, “The electricity company employees come whenever they want to check the meters and write as much as they want in the bill.” In some neighborhoods, nonpayers claim that their meters are intentionally altered to run faster and record higher-than-actual electricity consumption levels.

In places with historically inadequate collection rates, the main reason behind nonpayment is related to the extent to which the nonpayment phenomenon is spread in the community. Respondents state that they stopped paying their bills because they did not trust that other citizens would pay their share. They felt it was unfair and pointless to do so, especially when people of higher socioeconomic status did not pay

their bills. During FGDs, respondents stated that people with acquaintances and money are able to obtain electricity supplies illegally. A female respondent from Rrashbull claimed that “families that live in very good conditions and even have air conditioning in their houses pay as much as me who uses electricity only for lighting and uses gas to cook.” Furthermore, a male nonpayer from Bicaj stated, “If hotels with 15 floors do not pay their bills, why would I pay?”

Respondents in the Bicaj and Kukes regions associate their nonpayment with the construction of the Fierza Hydroelectric Power Station that was completed in 1979 in arable lands that used to belong to communities. The population of Kukes was displaced to a new location, and nearby villages lost significant amounts of arable land for which they were not compensated. This is why a majority of the population has not paid for electricity in the past two decades.

BOX 9. NONPAYMENT IN SERBIA

In Serbia, FG respondents state that nonpayment is related to poverty and debt accumulation. The most vulnerable households illegally connect to power systems or they illegally collect wood from forests by the river. People do this despite knowing they may be fined or face prison sentences. Similar to Turkey and Albania, where nonpayment is a problem, in Serbia poor households do not consider using electricity illegally as stealing, and believe they are entitled to free electricity. Respondents blame the state for failing to help poor households and for the constant price increases and exorbitant interest rates. Poor households justify illegal use with the mantra, “Stealing from thieves is not stealing.” Poor residents of Belgrade who live in urban town settlements mention that although they do not use illegal electricity due to a lack of technical possibilities, they would if they could. As a poor respondent from Belgrade put it, “We’ve reached such a point that I would be prepared to steal electricity. I’m honest, but I’m forced to. If the state is not ashamed, why would I be. Is the state ashamed of its citizens living the way we do? There are much greater thieves in this state than I would be if I stole electricity.”

Collecting wood is risky and includes the problem of transportation. Most poor households lack vehicles and use either a bike or a wheelbarrow to transport wood, which requires help from their acquaintances and is very difficult and tiring. Moreover, people also quarrel and physically fight with each other over the distribution of found wood.

Most of the FG participants, particularly the vulnerable and households with school-aged children or younger, are forced to postpone electricity bill payment. In rural areas, not paying for electricity is described as the most efficient measure, since using electricity is not as necessary because wood is used to heat the home and prepare food. In urban areas, there are two approaches to not paying electricity bills. Citizens with a lot of debt do not make minimum payments, because the interest on the debt exceeds the minimum monthly payment amounts. The amount of debt related to interest is one of the most frequently registered

complaints. Respondents say it is impossible for them to settle their debt since after a month or two of nonpayment in winter, they enter the vicious circle of earning "interest on interest." Respondents whose debt is below 30,000 dinars try to pay at least something to prevent disconnection. As one recipient of social assistance stated, "I pay at least a little bit every month, so although my debt is more than 24,000 dinars, they do not touch me and I didn't receive a warning note." If respondents in debt are disconnected, they try to reconnect to the power network on their own. Respondents mention two ways of reconnecting: using wires from the electricity pole and unsealing the electricity meter that was previously sealed by the power company. In such cases, respondents worry about the illegal connection starting a fire, and of being arrested and sent to prison.

IV. ENERGY EFFICIENCY AND ENERGY-SAVING BEHAVIOR

Households take active measures to minimize their energy consumption in order to save money. Low-income households do this by reducing the amount of space they heat, using energy sparingly, and adopting basic low-cost insulation measures. These measures impact their quality of life, but result in marginal savings. Middle-income households are more proactive about making more advanced energy-efficiency improvements and switching to new energy-efficient appliances. They note that their energy bills more substantially reflect these measures.

46. Households consistently adopt energy-saving behaviors as a way to cope with energy payments. As a result, most respondents do not think they have much opportunity to further reduce their energy use without encroaching on their basic needs. In low-income households these behaviors consist of long-term habits such as switching off lights in unused spaces, and also more severe measures such as keeping the home inadequately heated, keeping only one room heated in the winter, or moving in with extended family for the winter.

47. Middle-income households have more recently begun to adopt these tactics in direct response to a rise in energy prices; energy-saving behavior in middle-income households is also more likely to feature the reduced use of household appliances. As mentioned above, middle-income households in Romania report

eschewing the use of household appliances and frequently do work manually, such as using a broom instead of a vacuum cleaner, washing clothes by hand, and reducing the use of coffee machines, microwaves, and other small appliances. In Croatia, middle-income households report they have stopped using their cars and some even avoid using public transportation; instead they walk or bike more often. Most middle-income respondents, and especially those in new EU member states, have made some energy-efficiency improvements to their house or apartment, such as replacing windows, doors, or insulating the walls.

48. Most households in the region tend to be highly motivated to invest in energy efficiency so as to reduce their consumption in ways that do not affect their needs. In Bulgaria and Romania, the vast majority of middle-income respondents

and about a third of low-income ones have invested in some form of thermo-insulation such as new window frames and inside or outside wall insulation. These measures are most often undertaken by individual households (using their own savings or loans) and less often collectively by residents of a building. In Tajikistan, Croatia, Kyrgyzstan, and Armenia, FG respondents are largely aware of more advanced home insulation methods, but few have invested in such measures, mostly due to their cost.

49. Better-off households have predominantly reaped the savings from energy-efficiency measures. Lower-income households in all countries make efforts to insulate through cheaper means such as putting cushions on windows, taping plastic sheets on windows, placing carpets on the wall, or using double carpets on the floor. These measures help improve the quality of insulation in the house, but have no or marginal effect on energy savings. Poor rural and small-town residents often use old electric boilers to heat water and have inefficient refrigerators in which to store food for the winter. Moreover, poor people tend to occupy less energy-efficient dwellings—older houses and apartment buildings where greater investment is needed for proper thermo-insulation. In Belarus, respondents say that utility bills in new buildings are at least twice as low as in older buildings. At the same time, households that have invested in new appliances, better insulation, or newer dwellings report significant savings. In Romania, FG participants who have invested in insulation report savings of 40–50 percent in their monthly bills.

50. Rural households across the region, and Roma in the new EU member states, are least active in making energy-efficiency improvements. This is

partly due to their more distinct living conditions. Rural houses are larger and more difficult to insulate; in rural areas in Tajikistan many households report they prefer to build separate small quarters for winter living than to invest in insulating their current house. For marginalized Roma groups—both urban and rural—who have insecure tenancy, and whose dwellings are in squalid condition and often have broken windows/doors, energy-efficiency improvements are not a priority. In earthquake-affected zones in Armenia, people who live in low-quality social housing, which they do not own, face similar constraints and disincentives. Financial constraints also play a role in these groups' lower participation in energy-efficiency activities—rural and minority groups are at higher risk of poverty and generally have less to invest in insulation.

51. There are also informational constraints to investing in energy efficiency. Rural and minority groups are less familiar with the benefits of such investments when fewer people in their communities have undertaken them. In addition, beliefs about some harmful effects of insulation materials may prevent households from investing in them; for example, there is a belief in Tajikistan, Kyrgyzstan, and Armenia that plastic windows are harmful for health, possibly due to the fact that they allow less ventilation when burning wood and solid materials indoors.



Covering windows with plastic sheets as an insulation measure, Tajikistan.

V. SOCIAL ASSISTANCE AND PROTECTING ENERGY AFFORDABILITY

Social assistance is an essential mechanism through which governments can mitigate negative impacts on rising energy costs for the poor. Findings from this research confirm that cash benefits are an important form of support for households that receive them. This study highlights areas where existing social assistance programs can be strengthened to facilitate access for vulnerable groups, based on respondents' observations. The research notes that variations in the degree to which social benefits cover energy expenses across different groups, due to local circumstances, influences citizens' trust in social assistance as a support measure in the face of rising tariffs. Lastly, this research affirms findings from previous studies that mitigation policies to offset the negative impacts of tariff reforms extend beyond those covered by last-resort assistance programs and include a large share of poor households. Support for pro-poor energy-efficiency programs, job creation, and income growth are all considered essential mitigation policies by respondents in this research.

52. All countries in this study have mechanisms in place to protect the poor. In all of these states, governments have also established programs to help low-income households with energy payments—either through housing and utility support benefits or cash transfers for the purchase of wood or coal. These programs have varied in their incidence and coverage, as well as in their ability to enforce equal standards of selection of beneficiaries across regions. For example, in Tajikistan, Armenia, and Croatia, funding and distribution of gas and electricity benefits is administered by local governments, which allows programs to better respond to

local needs, but also constrains their ability to mobilize sufficient funding to cover all eligible households, and to ensure that the same criteria for access are applied nationwide. In other countries, such as Romania and Bulgaria, governments have guaranteed funding for heating allowance programs from the central budget.

53. Benefits that aim to support energy payments can reach a limited proportion of the poorest two quintiles of the population. In some countries, such as Belarus, these benefits are targeted at certain categories of citizens (such

as war veterans or single mothers) that may not necessarily represent the poorest; in others, such as Bulgaria and Romania, governments have improved targeting by adopting income and asset tests to select beneficiaries below a certain wealth threshold. Yet in other cases, such as Tajikistan, discretion is given to local councils to determine beneficiaries for gas and electricity support in their location. Data show that current measures still fail to reach a large number of the poor. This is due to a number of reasons, including low funding allocations to social assistance programs, and different inclusion and exclusion errors. In Bulgaria, 88 percent of the poorest quintile did not receive the heating benefit (HB) (World Bank, 2013b). In Romania, prior to 2013, about 38 percent of the poor were excluded from the HB, prompting the Ministry of Labor, Family, and Social Protection to expand eligibility by removing some asset filters and putting in place stricter fraud control mechanisms to prevent better-off households from receiving the benefit (World Bank, 2013c). Most countries in the region are taking steps to modernize their social protection systems and consolidate assistance programs to more fully serve the needs of the poorest.¹⁵ Improvements in targeting, generosity, preventing fraud, and inclusion and exclusion errors can make social assistance benefits a more reliable form of support for the poorest. At the same time, these programs would be an insufficient protection mechanism for low- and middle-income households that are also likely to have serious trouble affording their basic energy needs but are ineligible for assistance. For this reason, prior research (see Ruggeri Laderchi et al., 2013) has suggested that protecting

energy affordability would require a broad set of mitigation measures, including social protection and energy-efficiency support, to reach a wider population group in each country.

54. This chapter presents some of the prevalent views among FG participants on the accessibility of social benefits and the extent to which social benefits are able to support their energy payments. These findings echo some of the known constraints about social assistance programs, noted above. Citizens' perceptions should be interpreted in the context of intentional eligibility restrictions; funding and capacity constraints; and the fact that countries included in this study are at different stages of reforming their social protection systems. At the same time, these findings showcase important concerns regarding the ability of some of the most vulnerable groups to access social assistance programs. They reveal challenges such as social stigma, discrimination, and potentially high variations in the effectiveness of heating benefits across groups, all of which affect the likelihood that households may seek this type of support. In addition, FGDs help assess low- and middle-income respondents' overall attitudes toward social assistance as a mitigation measure for energy tariff reforms, and help gauge their expectations of what the government should do to protect energy affordability.

PERCEPTIONS OF SOCIAL ASSISTANCE ACCESSIBILITY AND EFFECTIVENESS

55. Participants in the study do not believe that social assistance can alleviate high energy costs because eligibility criteria for benefits are restrictive, and many households that respondents consider to be vulnerable are left out. These opinions are especially prevalent in

¹⁵ See Tesliuc et al. (2014) for a detailed review on the progress of last-resort social assistance programs in ECA.

Armenia and Bulgaria. Respondents think it is unfair that owning land or real estate—which are often nonproductive assets—may disqualify them from receiving the benefit. Respondents in Bulgaria are concerned that disability benefits are considered part of household income and sometimes render a family ineligible for heating benefits.

56. A number of low-income FG participants note that seasonal work and informal sources of income make it difficult to access social assistance. Eligibility requirements may include long-term unemployment or consistent registration with an unemployment bureau, which informal or migrant workers are unable to maintain. In the new EU member states, this is particularly problematic for the Roma, who often engage in seasonal work; yet this is also the case for many poor households in all countries in the sample, especially in rural locations where there are limited opportunities for formal employment. In Bulgaria, residents of a remote rural area who rely heavily on seasonal construction work expressed the same concern. Some respondents also expressed the opposite concern—that households that rely on informal sources of income or on remittances receive social assistance despite having income that should make them ineligible. For instance, in Croatia and Tajikistan, the high prevalence of informal incomes and remittances is very high, which fuels perceptions that benefits are unfairly distributed.

57. Perceptions of the effectiveness of heating benefits are influenced by the degree to which they cover energy costs, which may vary widely across groups within a given country. As discussed in Chapter I, household vulnerability to energy tariff increases is influenced by multiple

factors such as the household's location, types of energy sources, whether it is possible to switch sources, and so on. Regional differences in tariffs for electricity, gas, and district heating further affect vulnerability. Given these diverse factors that determine a household's overall energy expenses and vulnerability to rising tariffs, heating benefits also ranges in how effectively it may help households meet basic energy expenses.

58. In Bulgaria and Romania, variations in heating benefits' efficacy are observed across groups using different energy sources. Social assistance workers in Romania and Bulgaria similarly estimate that the extent to which heating benefits covers a household's energy expenses may vary substantially across households. In Bulgaria, households that receive the allowance and use wood for heating report that the benefit covers a much higher proportion of their winter heating expenses than households that use district heating. A social assistance worker in a remote mountainous location in Bulgaria where the heating season is longer and wood costs more estimates that the benefit covers no more than 10 percent of a household's heating expenses. In other rural and small-town areas, social assistance workers estimate that the benefit is enough to fully cover the heating expenses of a person who lives alone, or to heat one room through the winter. The same level of assistance may therefore cover a wide range of expenses depending on a household's location and the source of energy used. In Romania, respondents who use district heating report that a greater portion of their heating expenses are covered by social assistance than those who heat with gas, wood, or coal. The degree of the benefit's effectiveness is also influenced by regional variations in tariffs. For example, in

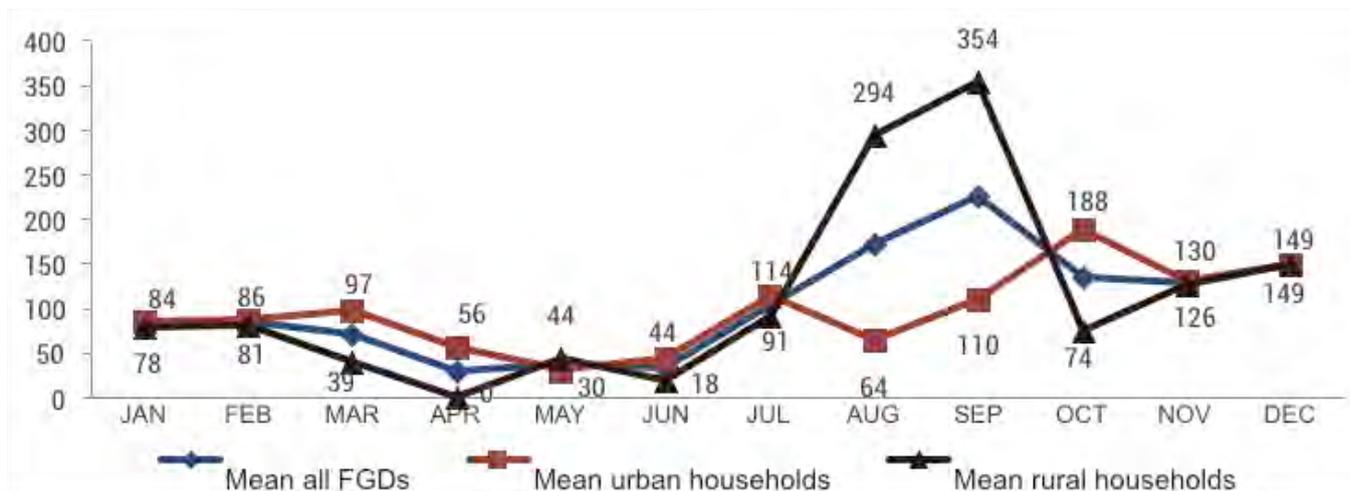
some of the sample regions in Romania, district heating tariffs have grown by more than 100 percent, whereas in other regions they have stayed constant. The size of a household and the availability of additional local government subsidies, among other factors, may also affect the way citizens perceive a benefit's effectiveness.

59. A majority of households that use solid fuels for heating believe that heating benefits should be aligned with the seasonal demands for purchasing these fuels. Across the region, households that use wood and coal for heating purchase these fuels in bulk in the late summer or early fall, when they are cheaper. Buying these fuels in small quantities through the year increases their overall cost. As an example, Figure 2 shows distribution of spending on wood through the year as reported by FG participants in Romania. In this case, rural respondents are more likely to consolidate wood purchases—they report greater capacity to store larger quantities of bulk-purchased fuel, as well as saving from purchasing food through the summer to afford a

bulk purchase of wood in the fall. Roma minority groups in Romania were the most likely to buy wood in smaller quantities throughout the year.

60. Because of these seasonal patterns of spending, the majority of respondents using wood in all countries in the study would prefer to receive heat benefits in consolidated amounts rather than in a monthly sum. Buying in bulk is not only more economical but is sometimes the only option, as many wood suppliers refuse to deliver wood in smaller quantities. Thus households often need to borrow money or save funds to cover fuel expenses up front, and consequently use the wood benefit for other needs—for food, covering debt, and so on. Heating allowance beneficiaries who use wood in Bulgaria note that the benefit is often not used directly to cover the cost of wood for heating (they need to mobilize funds for it earlier in the year), but rather serves as additional monthly cash during the winter. In Croatia, respondents who receive this benefit complain that it comes in November when wood prices are significantly higher. In both Croatia and Armenia, FG participants note

FIGURE 2. RURAL VERSUS URBAN PATTERNS OF PROCURING WOOD FOR HEATING IN ROMANIA (RON/MONTH)



Source: FGD in Romania, from Metro Media Transilvania. 2014. "Romania: Qualitative Assessment of Poverty and Social Impacts of Energy Reforms." Report, Metro Media Transilvania, Cluj, Romania.

that the amount of the benefit for wood should take into account increases in wood prices.

61. In several countries, it is considered shameful to receive social assistance. Because of this, households that do not currently benefit from social assistance are unwilling to view it as an acceptable way to cope with high bills. In Belarus, income-based social assistance is stigmatized (as being received by “drug addicts” or “alcoholics”) and is thus not readily perceived as a mechanism for helping with energy expenses. Instead, households look to their primary energy service providers or multiservice utilities (*zhekhs*) for help. In Bulgaria, discussions about whether the social assistance system is an appropriate way to channel resources for mitigating impacts of growing tariffs sparked some ethnic hostility toward Roma, who are perceived to overwhelmingly benefit from social assistance programs. In Kyrgyzstan, low-income men feel ashamed to ask for help or seek social assistance, as it clashes with gender norms and cultural expectations, which hold that men are providers and cannot depend on anyone or anything, particularly the government. In Armenia, it is considered shameful to be dependent on government support.

62. Regardless of the limited coverage of social assistance and the negative associations with social assistance, households that rely on these benefits consider them an essential form of support. This is especially true for households that can cover most of their heating bills with this assistance. Other households, however, strongly prefer support to investments in energy-efficiency measures: In a context in which households are already actively reducing their spending on energy, the prospect of investing in more advanced home insulation is regarded

as the best long-term strategy for lowering expenses. Job creation is also frequently mentioned as a way to help households manage energy payments.

PERCEPTIONS OF SOCIAL ASSISTANCE INSTITUTIONS' ACCOUNTABILITY

63. Many respondents' concerns involve the lack of transparency surrounding eligibility criteria and social assistance programs' very complex application process. In Tajikistan, low-income respondents in both urban and rural areas stated they are unaware of eligibility criteria and that they would need legal help to access the social assistance to which they are entitled. In Bulgaria, most respondents stated that one needs specialized help to understand the eligibility and application process for social assistance. Roma, and especially Roma women, some of whom are uneducated or illiterate, often note they are discriminated against during the application process, in that the application procedure is not properly explained to them.

64. Personal interaction with social assistance workers—and such workers' attitude toward applicants—are considered an essential part of accessing benefits. Not only are these interactions necessary to formally submit an application, but they are also viewed as essential for obtaining the information and assistance to successfully apply. The majority of poor respondents in the study acknowledge that it is difficult to understand eligibility requirements and the application process. They view the support of social assistance officials as crucial to one's chances of submitting a successful application. Respondents' grievances are also mostly related to complex regulations and insufficient help in understanding rules and requirements.

“Ninety percent of receiving benefits or being rejected depends on the social worker you’ve contacted, because they may not give you sufficient information for everything, and you get in a never ending cycle of going back to get more documents. If they decide to put up obstacles, they will.”

—LOW-INCOME MAN
SMALL TOWN, BULGARIA

65. In Bulgaria, participants from different settlements suggest that social assistance offices purposefully sabotage applications because they lack funding to distribute benefits to all eligible households. People in Tajikistan have similar suspicions. Respondents stated that the lack of clear information about eligibility allows the local government great discretion in distributing benefits, which may be leaked to better-off and better-connected households. In Armenia, some respondents believe that eligibility scores are calculated at social workers’ discretion, and do not trust that being accepted for benefits is based on objective criteria.

“Everything is done so that you give up applying.”

—LOW-INCOME MAN
SMALL TOWN, BULGARIA

66. Both beneficiaries and non-beneficiaries say simplified information about application

procedures and eligibility criteria is needed so citizens can easily understand and access the support they are entitled to. Some of the most informed participants in FGDs were family members of persons with a disability. They have been forced to read all relevant legislation to exercise their rights, as there is no simple or user-friendly way of learning about their entitlements. The complex procedure and time required to submit an application discourages some potential beneficiaries (usually urban, male) from seeking heating benefits altogether. Some Roma respondents in Bulgaria also mention that obstacles in applying arise from the fact that social workers are less familiar with their family situation.

“In the village we know each other, we know who has what, but the social service officers, they don’t know us. We apply and match their requirements, but they have no idea about how we live.”

—ROMA WOMAN
RURAL AREA, BULGARIA

67. Claiming benefits is even more complex since the eligibility criteria for these programs are not always clear. As a result, citizens lack information about them or are skeptical of their chance of receiving assistance. For example, in Tajikistan, local government officials select electricity and gas benefit recipients using unclear criteria, which led most poor respondents in the sample to conclude that the benefit does not reach the most vulnerable households.

VI. GOVERNANCE AND ACCOUNTABILITY OF ENERGY INSTITUTIONS

Public opposition to reforms is equally rooted in concerns for affordability, as it is in ones regarding governance and accountability. Governance and accountability concerns relate to the direct interaction with energy providers, e.g. quality of service, billing transparency, resolving grievances, citizens' ability to express themselves as consumers, and seek their rights. They also relate to concerns about overall management of the sector, and their trust in the government's ability to put in place reforms that benefit all. Public opposition to reforms also stems from deficiencies in information, mostly related to misunderstanding the justifications for reform.

68. Qualitative data provide some insight into the factors that shape public attitudes toward energy reforms, and in some cases, drive strong public opposition to reforms. Consumer acceptance of price increases is often related to energy affordability, but it is also related to the overall quality of the relationship between citizens and their state, and perceptions of the energy sector. Understanding these factors is important given that social mobilization against energy tariff increases has been a key political constraint to implementing these reforms. In the Kyrgyz Republic (in 2010) and in Bulgaria (in 2013), electricity tariff increases led to public protests and, ultimately, to changes in government. In Bulgaria and Romania, as well as other countries in the region, political candidates have often made keeping energy prices low a feature of their election campaigns.

69. Energy affordability is a main concern for consumers across the region. The fact that wages and pensions have not grown proportionately to tariff increases is perceived as unfair in most countries.¹⁶ In fact, many respondents mention that their incomes have been stagnant or have been reduced, or that they have lost their jobs due to economic crises. Many respondents also feel that energy prices should be linked to income levels in the country. For example, citizens of new EU member states—Romania, Bulgaria, and Croatia—object to the idea of paying the same market level of energy tariffs as those in Western Europe, given the disparity in their incomes.

70. Governance and accountability concerns, described in more detail below, also underlie

¹⁶ These sentiments are not expressed in Belarus, where the president has explicitly said that price increases will not exceed US\$5 a year and will be related to income increases.

opposition to reforms. On the one hand, these concerns emerge from citizens' overall lack of trust in the state, and the state's role in energy sector governance in particular. On the other hand, they are rooted in low understanding of the rationale for reforms. Governance and accountability concerns also arise from citizens' routine interaction with energy providers, and a feeling of powerlessness in seeking their consumer rights vis-à-vis energy institutions. Together these factors suggest that efforts to improve governance, accountability, and communications of reforms are needed, both by the state as well as by providers, in order to raise awareness and work towards reshaping the social contract with regard to energy provision.

ENERGY SECTOR GOVERNANCE AND COMMUNICATIONS REGARDING REFORMS

71. Citizens' ideas about the state's role in service provision affect perceptions of energy sector reforms. The strong legacy of a social contract from the Communist era, when affordable energy provision was seen as the state's responsibility, is observed to a different degree across countries. The belief that citizens are entitled to low-cost energy services is especially prevalent in Belarus and Central Asian countries, in which utility services are still owned and/or controlled by the state. Older and rural participants in new EU member states also share this belief. For example, in Romania, some older participants question the logic of paying a utility company to maintain a network that was "built by [their] fathers." Additionally, groups that do not pay for services in Turkey, Albania, and Serbia argue that they are entitled to free electricity because the state fails to help poor households.

Older and rural respondents tend to attribute tariff increases to private providers entering the market; whereas others, usually younger and urban participants, relate tariff increases to state monopolies and the lack of competition. Both these groups, however, express common frustration with the lack of transparency and controls in the management of the sector.

"Let me tell you something: I'm afraid when I even only hear of 'reforms,' because for more than 20 years now, since 1990 I keep hearing the word 'reform' and it has always dragged us a little further down into hardship: draw the belt a little bit tighter.... So, I don't know, really, in principle ... a reform should be ... something more efficient ... and for people to have easier access ... to stuff ... but reforms have always brought only steep prices and hardship.... I don't know what it involves, but believe me, I can't expect it to bring anything good, and that's the truth of it."

—LOW-INCOME MAN
PENSIONER, RURAL AREA, ROMANIA

72. These views are also often rooted in a sense of common ownership of natural resources, combined with scarce information about how much it costs to produce energy. Respondents

in southeastern Turkey think it is unfair that the government charges them more for energy, considering that the government uses hydro-resources that come from their region. In Bulgaria and Tajikistan, citizens and civil society organizations (CSOs), respectively, are resentful of the fact that energy produced with national resources that “belong to the people” can be exported at a lower price than it is sold domestically.

73. The rising cost of energy is often perceived as “artificial,” related to corruption, monopolies, and/or the profit-seeking behavior of private companies. Citizens do not believe that revenues generated by higher tariffs will be spent to their benefit (such as on improving the network, quality of service, and so on) but rather think it will be used to enrich utilities, energy traders, and/or energy company employees. In Romania, FG participants mention the “smart guys”¹⁷ as part of the reason for unwarranted tariff increases. In Bulgaria, some attribute the higher electricity prices directly to investments in renewable energy, and believe that higher cost only results in profits for solar field investors. In Tajikistan, Bulgaria, and Croatia, respondents noted that energy company employees receive higher wages than other public employees; many relate higher tariffs directly to enrichment of energy company employees. In southeastern Turkey, several FG respondents said that company employees accept bribes from illegal electricity users who want to avoid fines. In Belarus, respondents think that price increases will only benefit businesses.

74. In addition, FGDs indicate that citizens do not see gains from subsidy removal being reallocated

¹⁷ Energy traders who have purchased energy at preferential prices from state-owned enterprises and sold them at a higher price on the free market.

to support energy affordability in vulnerable households. Most governments have not made clear commitments to mobilize the revenues from subsidy elimination to support energy affordability programs. Where such schemes have been discussed by the government, they have not been widely communicated.¹⁸ In other cases, such as Croatia, a national working group has been established to discuss a model and financing to protect vulnerable customers, yet has had no conclusive results to date.

INTERACTION WITH ENERGY PROVIDERS

75. Opposition to reforms also stems from a feeling of powerlessness in seeking accountability from service providers. Respondents do not see tangible improvements in services, complain of unclear or inconsistent billing, and find it difficult to resolve their grievances with providers. This is especially difficult for women, ethnic minorities, and rural residents, due to social norms, discrimination, or physical distance from the provider.

76. There is little communication between citizens and energy service providers across the region. Most households have been connected to basic utilities for decades and have paid low tariffs, and there has been little to no incentive or mechanisms to provide feedback or demand service improvements. In turn, service providers have not developed strong capacity for outreach, grievance resolution, and customer service. This was observed most clearly in countries such as Belarus, where tariffs had not risen noticeably at the time of research, and providers' institutional structure was mostly unchanged.

¹⁸ For example, the windfall tax scheme in Romania that was discussed but not implemented (PEA report).

77. In countries where more changes in the sector have been felt by consumers—such as tariff increases or privatization of energy providers—consumers express greater dissatisfaction with services and are more likely to voice their expectations of better service quality. Higher energy bills increase citizens' attention to the sector, and increase their demand for improvements. Changes in billing, metering, and tariff calculation methods also result in greater consumer interest in the process and in billing fairness. Most consumers state that the energy sector's technical details are difficult to understand and therefore have no comment on them, but many complain about the quality of service, the lack of clarity of metering and billing, the difficulties in interacting with providers, and the overall price in relation to the quality of service received.

78. The most common concern cited by respondents relates to service reliability and the quality of electricity, gas, or district heating. Commonly noted problems include fluctuations in electricity voltage (which damages household appliances); frequent and long-lasting power outages; low quality of gas (gas mixed with air); network damages that interrupt service; and low levels of heating and hot water. In new EU member states these issues are noted more rarely, while in Central Asian states, Armenia, and Turkey they are reported more frequently. Low-quality energy is inconvenient but also imposes additional costs. Consumers have to pay for appliances to be repaired or replaced, collect money for rapid network repairs (reported in Tajikistan), purchase power generators, use supplementary heating sources such as electric heaters when the level of central heating is too low, or pay more to run the hot water tap longer to reach the desired temperature (Romania).

“Our white appliances were destroyed due to high voltage. The customer service [of the appliance producer] provided us with a document stating that the appliances were burnt out due to a voltage surge. Yet the electricity service provider did not accept responsibility.”

—LOW-INCOME WOMAN
URBAN AREA, TURKEY

“My television burnt out due to voltage fluctuations.”

—LOW-INCOME MAN
URBAN AREA, TURKEY

79. Another set of issues involves billing clarity and consistency. Electricity consumers in both Romania and Bulgaria note they do not understand the way in which their bill is calculated, and are especially resentful of the inclusion of a “green tax” for renewable energy and a “TV and radio tax” (in the case of Romania). In Bulgaria, consumers also think their bills rise independent of the tariff increases or decreases announced in the media. Each year they try to further reduce their spending, but say the connection between their consumption and their bills is not consistent. Similarly, many do not believe that the overnight energy rates (which are supposed to be cheaper) are calculated properly on their bill. In Croatia, some FG participants also complain about unclear bills.

"We are no longer impressed when they announce cuts in the energy prices, because we cannot feel the effect of these cuts."

"Since when is this decrease? I don't understand. We pay a lot. A lot!"¹⁹

"Yeah, half of us use electricity at nights; and we, the other half, do not, because we know this is useless."

—LOW-INCOME WOMEN
URBAN AREA, BULGARIA

80. Some consumers also complain that they do not receive any invoices, and/or have no way to check whether their bill corresponds to the amount of energy they consumed. Many respondents in Bulgaria stated that when payments are made online or in person, customers are only told the total amount owed. In Belarus, apartment residents served by multiservice utility companies pay a common bill for multiple services (electricity, water, heating, garbage collection, and so on) and do not closely monitor their bill for how much each service costs. Roma respondents in segregated settlements in Romania and Bulgaria report that their meters are intentionally placed high up, out of residents' reach. In Turkey, respondents say they receive their electricity bills irregularly,

¹⁹ A 5 percent average decrease in electricity tariffs was announced as of July 2013; respondents are aware of the decrease but do not see it reflected on their bills.

which results in the need to pay more at one time. Some FG respondents also contend that their meters are misread.

"Once I received an electricity bill of 250 TRY. They misread the electricity meter. I went to the service provider to solve the problem, but they told me that even if it was misread, I had to pay the bill as it was already issued. I paid it."

—LOW-INCOME MAN
URBAN AREA, TURKEY

81. District heating users tend to be least informed about the composition of their bill. They are also most likely to believe there is an unclear connection between their heating bills and actual heat/hot water consumed. Mostly they believe that bills are manipulated to cover network losses and nonpaying customers. This perception is reinforced by the fact that heating bills received in the beginning of the season are prognostic (based on the previous year's bills), and reconciliation bills, reflecting real consumption, are only received at the end of the season; in this way, consumers have no way to monitor their monthly bills based on the real amount of energy consumed. All district heating FGs in Croatia noted unusually high bills in January 2014, for which the heating company had no explanation. In Bulgaria, district heating users are dissatisfied with the fact that they may be overcharged throughout the heating season and that reconciliation bills do not include compensation for overpayment; meanwhile, if they delay payment to the company, they are charged penalty fees. In Romania, district heating users more frequently associate unfair billing with

nonpaying customers and neighbors who steal heat by installing additional undeclared radiators.

“You suspect that they manipulate the bills? – We don’t suspect, we are sure.”

–LOW-INCOME WOMAN
SOFIA, BULGARIA

“Taxes, green certificates, pluses and minuses all over the bill.... They calculate the bills in such a manner that we won’t understand.”

–LOW-INCOME WOMAN
URBAN AREA, ROMANIA

82. Customers' experiences in attempting to exercise their rights—such as efforts to get information from energy providers or resolve their grievances—play a strong role in shaping their attitudes toward the sector. Contacting providers to clarify billing questions or grievances takes up a lot of citizens' personal time, yet rarely results in a resolution. In Romania, electricity and gas consumers frequently demand that well-staffed local customer service offices be reestablished so they do not have to travel far to see a customer service official or wait in long lines. In Bulgaria, respondents note that their questions are either dismissed by company officials or met with the direction to read a lot of laws and regulations. In Tajikistan and Armenia, consumers are more likely to contact local controllers to discuss billing or service issues, and rarely contact the company offices directly. Overall, respondents in all states think contacting providers is not worth the effort.

“They say I have to read the law. But if I have to read this law, that law, I have to become a lawyer. I haven’t studied that.”

–LOW-INCOME MAN
SMALL TOWN, BULGARIA

“The problem is that people have no time and no nerves and no competence.

To fight against such an institution one must have a lawyer and the money to pay to somebody to defend your interest....

People do not have the strength to fight this thing at all.”

–LOW-INCOME WOMAN
SOFIA, BULGARIA

“If those people who are supposed to provide a service and help you don't want to help, how could you look for help? It's like hitting the wall.”

–LOW-INCOME MAN
SMALL TOWN, BULGARIA

“I ask them to tell me how they compute the district heating, they say it is very complicated you will not understand it.

I say, I am an engineer,
I will understand.”

—LOW-INCOME WOMAN
SOFIA, BULGARIA

“We’re all dissatisfied
with ENEL here....
But we don’t know who
to complain to. They’re
in Bucharest, that’s why.
I would need to dial a
Bucharest number.”

—LOW-INCOME MAN
RURAL AREA, ROMANIA

“Everything in our life
depends on electricity.
You are completely
dependent on one
monopolist, which is the
electrical company.
I don’t say that we don’t
have to pay but what
choice do we really have?
That monopolist believes
that no one can win against
them and they can do
whatever they want.”

—LOW-INCOME MAN
SMALL TOWN, BULGARIA

83. Consumer attitudes are also influenced by the fact that companies are mostly active in consumer outreach when it comes to payment collection, but not in responding to inquiries or resolving grievances. In Bulgaria, a district heating company representative notes that there is no capacity or obligation to answer all queries and grievances; hence ones that are considered irrelevant are ignored. At the same time, the company has established a customer relations center that regularly follows up with consumers who have delayed payments, works with them to restructure debts, and issues legal threats to long-term nonpaying customers. As a result, the company recovered over 2 billion BGN in debts in 2013 alone. In Kyrgyzstan and Armenia, electricity and gas companies post the names of nonpaying households on building bulletin boards to shame people into paying. Thus consumers often feel they have no chance to resolve grievances with the company, yet feel under constant pressure to make payments.

84. Despite the problems interacting with providers, the large majority of respondents in the study prioritize affordability over quality. Because of concerns over the affordability of services, they state that improvements in quality and customer service would not make tariff increases more acceptable. Exceptions to this are groups with higher means, such as younger middle-income respondents in Bucharest (Romania), or groups that are more deprived of services, such as rural respondents in Tajikistan. The latter receive electricity only 3–7 hours a day in the winter, and express greater willingness to pay more for continuous electricity service.

85. Overall, the attitude toward energy sector reforms is resignation. Consumers expect their energy bills to rise and their budgets and well-being to be affected, but do not understand the justification for the reforms; nor do they believe they have any voice in policy decisions surrounding the reforms.

VI. CONCLUSIONS AND RECOMMENDATIONS

The research presented in this report complements prior quantitative research on the poverty and social impacts of energy subsidy reforms. Its findings can inform the development of more socially sustainable energy reforms. First, qualitative findings underscore the need to develop comprehensive solutions to support energy affordability for vulnerable groups. Coping with high energy costs may have long-term negative impacts on health, nutrition, and overall well-being, and affect poor as well as some middle-income households. Helping households reduce their energy consumption without compromising their basic needs could minimize these impacts. Second, this research highlights the need for governments and energy providers to ensure wider acceptance of reforms by (i) improving citizens' awareness of the rationale for reforms; (ii) committing to high transparency; and (iii) improving the way they communicate about improvements in sector governance. Thirdly, findings highlight the importance of strengthening clarity regarding consumer rights and obligations, introducing accessible and effective customer services, and enforcing strong grievance and redress mechanisms. Lastly, findings indicate that citizen feedback is necessary to understand and address the poverty and social impacts of reforms.

RECOMMENDATIONS TO GOVERNMENT FOR PROTECTING ENERGY AFFORDABILITY

86. Rising energy tariffs are increasingly encroaching on households' ability to maintain basic levels of heating, and are affecting other needs such as nutrition and health. The cumulative impact of rising costs in all utility services, along with the economic crisis, has adversely impacted all aspects of well-being, including health, nutrition, education, social activities,

and so on. Energy tariff increases are perceived as having a direct impact on such deprivations. Households do not have the capacity to infinitely reduce their energy consumption, or to switch to alternative cheaper sources; hence they choose to compromise other basic needs to ensure continuous access to energy for heating, lighting, and cooking. These impacts are felt widely in society by both poor and middle-income households. Their effects are more starkly felt by the poor, who have been applying such coping

measures for a longer period of time, as well as by households in rural or more economically depressed regions and pensioners who cannot easily augment their incomes. Middle-income households also increasingly feel their lifestyle affected by rising energy costs.

87. Helping households adapt to reforms without compromising their basic needs calls for a comprehensive set of mitigation measures.

Evolving systems of social protection are essential to support the monthly expenses of the poorest. Among the countries included in this research, the effectiveness of social assistance varies widely; hence continued efforts are required to strengthen social assistance and make it a reliable safety net for the poorest. Pro-poor energy-efficiency measures are also essential, as they have the potential to generate long-term savings for the poor and improve their heating comfort. Moreover, extending awareness and support for energy efficiency among the poor can empower them to look for more efficient ways to adapt to rising costs. Middle-income households are currently better positioned to reap benefits from energy-efficiency investments due to both greater financial means and access to better information.

88. Mitigation measures should be flexible and consider the fact that energy needs and costs may vary substantially across regions within the country.

For example, due to decentralized heating systems, urban households in some regions may face much higher costs for heating. Households in mountainous regions or regions with extreme weather may have more difficult access to fuels, face higher prices, and have greater heating needs. The effectiveness of mitigation measures may also vary across social groups. Pensioners who live alone, households with high medical expenses,

and families with many children may be especially vulnerable to tariff increases. Households whose dwellings are in poor condition may be less able to partake and benefit from energy-efficiency support. It is thus important to consider the needs of especially vulnerable households and ensure equity in national mitigation programs.

89. Social protection programs to help with energy expenses should be continuously strengthened to provide meaningful support to the poor.

In countries such as Romania, where governments have taken concrete measures to increase coverage, improve targeting, and reduce fraud and error in benefit allocation, FG respondents are more likely to recognize heating benefits as an essential form of support. In the other countries of the sample, such as Armenia, Bulgaria, and Croatia, energy benefits are seen as overly restrictive and very difficult to access due to restrictive eligibility criteria and complex application procedures. Yet in other states, such as the Kyrgyz Republic and Tajikistan, households lack sufficient information about the benefits; they believe that social assistance workers and local authorities use too much discretion when allocating benefits, and for these reasons do not express high confidence in social protection as a way of protecting energy affordability.

90. The majority of respondents in this study favor energy-efficiency investments as a mitigation strategy to protect energy affordability.

Households at all income levels are actively putting energy-saving measures in place. Nevertheless, wealthier households that can afford more advanced insulation and new energy-efficient appliances are the ones most likely to experience greater comfort and to save on bills. Government programs to support energy efficiency, where they exist, are not often accessible to lower-income

households due to the associated up-front costs, credit, and cofinancing requirements. In addition, poor households often lack detailed information about the costs and benefits of insulating homes and replacing inefficient appliances. Extending energy-efficiency support to a wider circle of households would be a popular and effective measure to support energy affordability in the long term, and could be more fully explored.

91. In cases where the most affordable and appropriate source of energy is wood or coal, it may be prudent to explore community interventions that could alleviate the stress of having to purchase winter fuels up front and in bulk. Poor rural households that are unable to procure heating fuels in bulk before the heating season often pay much more to purchase these fuels in smaller quantities throughout the winter. Supporting a community warehouse could make it possible for households without storage space to buy wood or coal in bulk during the time of year it is most affordable. This can be particularly useful in semiurban areas, where households lack a lot of storage capacity. Small-scale livelihood interventions can also be designed to make it possible for individuals to harvest wood sustainably and sell it in areas where there is demand, or produce and sell cheaper biofuels. Such programs have the added advantage of increasing incomes in the community in addition to improving access to energy sources.

RECOMMENDATIONS TO GOVERNMENT AND NATIONAL ENERGY SECTOR INSTITUTIONS REGARDING COMMUNICATIONS

92. Considering that energy tariff reforms across the region are expected to result in energy price increases, it is difficult to make these reforms popular, but it is possible to

increase their acceptability. Most respondents in this research do not see price increases as a stand-alone issue; rather, they focus on the relationship between increasing energy prices and their incomes, as well as what effect the energy price increases would have on other essential goods and services, and/or on their livelihoods. It is impossible to generalize consumers' attitudes to the reforms as a whole. Depending on their location, age, education, and political views, among other factors, consumers' opinions on the desired direction of energy sector reforms across ECA may diverge widely; they may range from staunch opposition to privatization and liberalization, to the belief that the state's influence should be minimized as much as possible. However, an overwhelming majority of FG respondents share an expectation that governments should conduct such reforms in an accountable, transparent, and noncorrupt manner; ensure that tariff increases are economically justified; guarantee that revenues are used to improve services for all; and make sure that adequate efforts and budget allocations would be made to mitigate adverse impacts on households.

93. Because of these perceptions, increasing reforms' acceptability means engaging stakeholders from multiple sectors in determining ways to make energy affordable; making energy institutions operate accountably and transparently; and ensuring that overall, the sector is perceived to be efficiently managed.

Governments need to communicate what efforts are being undertaken to ensure that reforms are conducted transparently; that corruption and other forms of mismanagement are prosecuted; and that energy utilities conform to international performance standards. Opening wider public dialogue on mitigation measures can help gain

wider acceptance of reforms, and also mobilize more civil society actors in monitoring and communicating aspects of the reform to the public.

94. There are multiple advantages to collecting recurring citizen feedback and establishing spaces in which to engage citizens in public dialogue regarding the reforms. Most ECA states face a context in which the economic rationale for energy reforms is poorly understood, but the reform agenda is highly visible and politically sensitive. The technical nature of details on energy reforms, combined with a strong impact on households' daily life, results in an environment in which citizens have strong attitudes toward the reforms, but—beyond elections—feel increasingly isolated from policy decisions that may influence outcomes. Maintaining a low profile around energy policy reforms is likely to perpetuate misinformation and a feeling of resignation among citizens. Creating more opportunities for public dialogue—for example, through citizen feedback surveys, public debates, and analysis—can help mobilize greater interest in a reform's specifics. It may also encourage more active monitoring of reforms by independent civil society and research institutions, and raise overall public confidence.

RECOMMENDATIONS TO SOCIAL ASSISTANCE INSTITUTIONS

95. Respondents in this research highlighted the key challenges that in their opinion prevent most vulnerable groups from accessing social assistance. These include potential beneficiaries' lack of knowledge about available assistance programs and complex application procedures that may inadvertently exclude eligible households if they fail to comply with the procedure.

96. Social assistance institutions can use a variety of channels to improve their outreach to targeted beneficiaries. These may include drafting messages in minority languages and distributing them on local media channels, which target an audience more likely to be negatively impacted by rising energy costs (such as pensioners, parents, minority groups, and residents in areas where energy costs are disproportionately high relative to other regions of the country). Employers, energy providers, civil society groups, and/or community institutions can also be approached to collaborate in promoting awareness of social assistance programs. Such awareness-raising activities should also aim to remove the stigma associated with receiving social assistance benefits, which would encourage all potentially eligible households to consider accessing this support.

97. Simplifying the application process and providing additional help filing applications can significantly increase the ability of poor and vulnerable groups to take advantage of this support. Low-income respondents across the study share a concern that the complex process of obtaining benefits may disqualify vulnerable groups. In Bulgaria, some citizens mention they need to pay others to help them fill out their application; in Tajikistan, respondents believe vulnerable households need legal help to claim benefits they are entitled to.

98. In addition, seasonal flexibility in the timing of benefits can make it easier for households to manage expenses. Due to the seasonal price fluctuation of wood and coal, many respondents state they would prefer to receive the benefit early in the season as a lump sum payment and take advantage of lower fuel prices, rather than use it monthly to purchase smaller quantities of wood at an overall higher price.

RECOMMENDATIONS TO ENERGY PROVIDERS

99. Although most respondents prioritize affordability over service quality, their trust in energy sector institutions, and their relationship with service providers, also strongly influences their attitudes toward the reforms. Middle-income groups in particular often disagree with energy price increases because these are not coupled with increases in quality. Weak systems of consumer rights protection, customer service, and grievance and redress create a sense of powerlessness regarding energy institutions and generate resentment of higher tariffs. Low-quality service can result in broken appliances, wasted time, and personal expense in trying to resolve grievances, and raises questions of whether increased revenues by energy institutions are prudently invested. Improving quality of service can also increase middle-income groups' willingness to pay.

100. As energy costs, consumers express greater interest in monitoring their own consumption. Simple bills that include monthly consumption, comparisons to previous months' or years' consumption, as well as to average consumption by other households in the area would bolster consumers' confidence that they are being fairly charged. Ensuring that all consumers pay their fair share, and communicating with the public about efforts to make sure they do, also matters. Many respondents indicated that they would not accept higher prices because they do not believe that all consumers, and especially large commercial consumers, are paying their share.

101. Trust in the sector is also largely based on a consumer's experience presenting grievances or otherwise interacting with energy sector staff. Consumers who are unsuccessful in

making their complaints heard are among the least likely to trust energy sector institutions. In many rural areas, the relationship between the consumer and the energy company controller—the main point of interaction between the two parties—seems to shape the consumer's perception of the sector. Ensuring that utilities have clear and well-enforced grievance redress mechanisms and staff that are trained to address customer concerns is thus essential for building trust.

RECOMMENDATIONS TO RESEARCHERS

102. This research has helped illustrate that qualitative and quantitative methods should be used in concert to understand the poverty and social impacts of tariff reforms. Qualitative data helps reveal impacts within the household and gain insight into citizens' priorities and behaviors with respect to reducing energy consumption and coping with energy expenses. Qualitative research helps identify variations in patterns of energy use and spending that are obtained through quantitative data, and helps identify social groups that may be disproportionately affected by reforms.

103. Qualitative and quantitative data need to be compared to devise comprehensive strategies that address both realities and perceptions. Qualitative and quantitative data generate controversial results, which point to differences between economic reality and citizen's perceptions. These differences should be better understood in order to make efforts to correct misinformation, as well as address other issues that may influence public attitudes for or against reforms. In this sense, analyzing discrepancies between various sources can help correct inaccuracies in assessing poverty and

social impacts, identify biases, and generally inform better policy solutions.

104. The interests and opinions of key sector and government stakeholders also matter when trying to implement reforms. In some countries, entrenched interests and rent-seeking behavior

have made it difficult for governments to institute technical solutions that would make the energy sector more sustainable. Understanding these interests, and how powerful individuals can mobilize groups in favor of or against reforms, is also important when designing measures to make reforms more acceptable.

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Armenia²⁰

1. This report presents findings from a qualitative assessment conducted between December 2013 and March 2014.^{21,22} The objective of the study was to assess the impacts of recent energy price increases on the poor and to inform the design of mitigation measures that would be acceptable to the population at large. Thirty FGDs were held with low- and middle-income households,²³ including FGs with individuals in formal employment and those who are unemployed or underemployed.

FGDs were held in four regions of Armenia—Shirak, Lori, Gegharkunik, and Kotayk—and the capital, Yerevan. The sample also accounted for households that use diverse energy sources and have varying eligibility for the Family Benefit Program²⁴ (FBP), the country's main social assistance program. All FGs were segregated by gender. Additionally, twelve key informant interviews were conducted with local government, national nongovernmental organization (NGO) and think tank representatives, and with national- and local-level experts in energy and social protection.

2. The main findings are as follows:

- Tariff increases in gas and electricity pose an exceptional burden on the low-income population, driving up prices not only of gas and electricity but also of wood and manure. FBP beneficiaries report spending the total amount of assistance they receive on energy bills during the heating season.
- Respondents state that their response to tariff increases is to heat a smaller portion of their household space (reported by 90

20 This summary note was prepared by Ekaterina Romanova. Data collection and initial analysis was carried out by Ameria CJSC. This note is part of a series of qualitative assessments carried out for the energy sector by the Europe and Central Asia Social Development Unit in FY14. The task was led by Michelle Rebosio.

21 The local research and consultancy firm Ameria CJSC carried out the field work. The pilot was conducted in November 2013 to test and finalize the research instruments.

22 The background information on country context and tariff increases on electricity and gas benefits significantly from the Poverty and Social Impact Assessment (PSIA) titled "Gas and Electricity Tariff Increases in Armenia: Poverty and Distributional Impact Analysis," prepared in 2014 by the South Caucasus Poverty Team (World Bank, 2014) and the report "Protecting Vulnerable Households from Rising Energy Tariffs in Armenia: Options and Fiscal Implications," prepared by the ECA Social Protection and Labor Global Practice (Morgandi et al., 2014).

23 Low-income households were recruited to represent the bottom two consumption quintiles according to expenditure levels based on 2012 data; middle-income households were recruited to represent the third wealth quintile.

24 The FBP is a means-tested and cash-based social assistance program in Armenia. Beneficiary eligibility is measured by a set of criteria that are summed up in an eligibility score. Based on administrative data, the FBP benefitted on average 96,867 households in 2012 (Morgandi et al., 2014).

percent of respondents), and to modify their sleeping and bathing arrangements (40 percent). Households also reduced spending on food, clothing, and education to be able to pay their energy bills.

- In Lori and Shirak, areas that were greatly affected by the earthquake in 1988, the situation is particularly dire. Here, a large number of people continue to reside in temporary housing that has been used far longer than originally intended, and they have limited access to different energy sources and employment opportunities. As a result, tariff increases pose an exceptional burden on this population group.
- Despite the high proportion of household budgets that go to energy payments, respondents have reported paying bills on time to avoid debt accumulation, disconnection, and high late payment and reconnection fees. Urban residents, more so than rural ones, do not delay their energy payments. Controllers in tightly knit rural communities often have personal relations with consumers and exercise a degree of leniency and flexibility with payments.
- Respondents have demonstrated a high level of awareness of the FBP program, but report increasingly strict eligibility requirements and a lack of understanding of how eligibility scores are calculated. Many believe that the program's targeting mechanisms are fraught with manipulation.
- Women are the main consumers of energy at the household level, except for heating, which is used by all household members. Due to their traditional roles as homemakers, women are more aware of how to use energy

efficiently and how to budget for increased energy use. At the same time, women have demonstrated a lower degree of interest and awareness of energy sector reforms.

- Respondents view energy tariff increases as unjustified. They prioritize affordability over quality. The overall attitude toward tariff increases is despair and resignation. Consumers do not believe that they can influence decision making in the sector.

Section I: Armenia Country Context

3. The Republic of Armenia (RoA), with a population of approximately 3 million,²⁵ is heavily dependent on energy imports.²⁶ Only 35 percent of the country's energy needs can be met domestically. The energy import bill constitutes 20 percent of total imports. Such dependency makes the country vulnerable to energy tariff fluctuations and external market and policy dynamics. Given the country's cold winters (temperatures generally range between -10 and -5°C) and subsequent extended heating season, energy reliability and affordability is of essence.

4. Electricity and natural gas are the most widely used energy sources in the country. According to the RoA's Public Services Regulation Commission (PSRC), the population consumed 1,950 million kilowatt-hours of electricity and 539 million m³ of natural gas in 2013. This

25 As of January 1, 2014, Armenia's permanent population was 3.017 million (National Statistical Service of the Republic of Armenia, 2014). About 63 percent of the population resides in urban areas. With more than 1 million residents, Yerevan, the capital, is the most populous city.

26 Energy imports include oil and oil products from the Russian Federation, Georgia, Iran, and Europe; gas from Russia and Iran; and nuclear fuel exclusively from Russia.

corresponds to 37 percent of total electricity consumption and around 30 percent of total natural gas consumption in the country. The type of settlement (urban/rural), type of housing (apartment blocks, single-family homes, etc.), and socioeconomic status determine households' choice of energy source.

5. The percentage of households connected to the natural gas network in Armenia is one of the highest among the countries in the Commonwealth of Independent States (CIS). Eighty percent of households are connected to this network. About three out of every four households in the poorest quintile have access to gas, compared to 85 percent of households in the top quintile. Rural residents and FBP recipients have a lower connection rate.²⁷

6. Gas is the primary source for heating in Armenia. The expansion of the natural gas network started in 2004, and since then an increasing number of households rely on gas

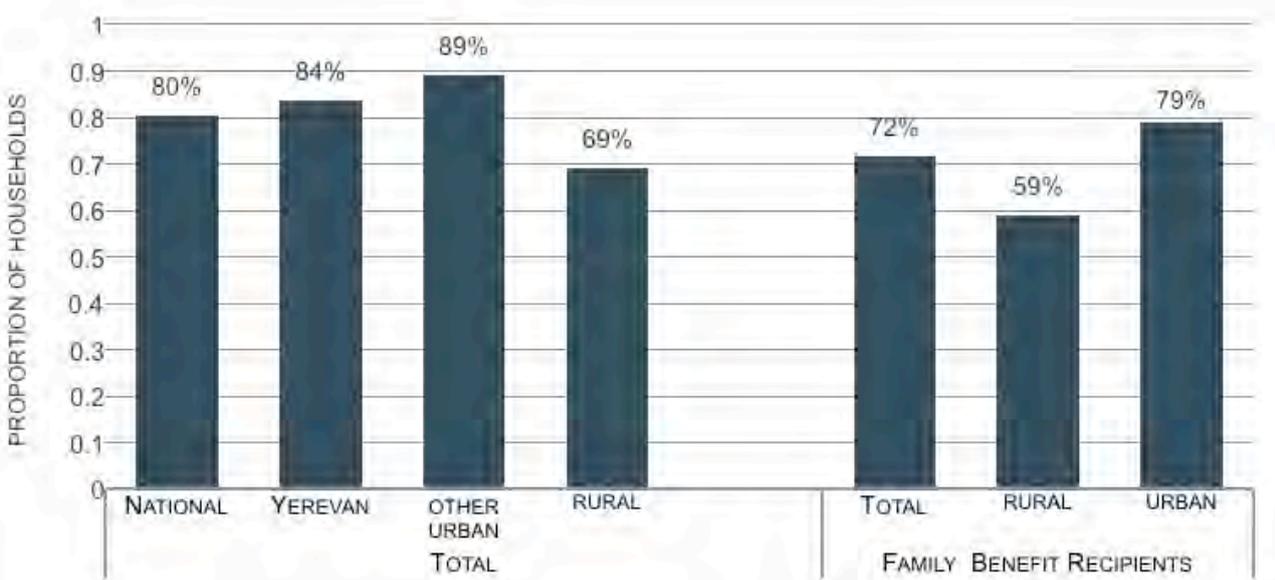
for their heating needs. Currently, approximately half of the households in the country use gas for heating, although the number has dropped in recent years due to increase in tariffs. Qualitative and quantitative data demonstrate that in urban settlements more than 60 percent of households use natural gas for heating, particularly in the capital, Yerevan; in rural settlements, even in those that are connected to the gas network, about 60 percent of the households use wood. Households' economic status is also a determinant in what energy source is chosen for heating. Only about 35 percent of FBP beneficiary households use gas as their main heating source during the winter; they largely rely on other sources, such as wood and manure.²⁸

7. As the government of Armenia (GoA) pursues energy sector reforms to improve the sector's efficiency, reliability, and sustainability, there have been notable improvements over the last

27 Sinha et al., 2014.

28 Sinha et al., 2014.

FIGURE 3. ACCESS TO GAS, PERCENT OF HOUSEHOLDS BY CATEGORY, 2012



Source: ILCS, 2012.

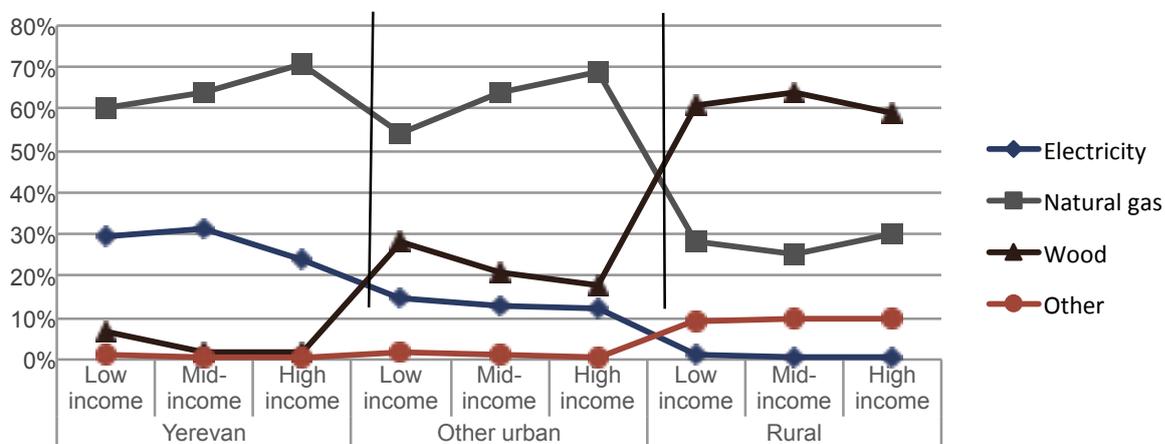
TABLE 1. MAIN TYPES OF ENERGY USED BY HOUSEHOLDS IN ARMENIA FOR HEATING PURPOSES (BY SETTLEMENTS)*

	YEREVAN	OTHER URBAN	RURAL	TOTAL, ARMENIA
None	2.7%	1.1%	0.5%	1.4%
Electricity	28.8%	13.7%	0.9%	14.5%
Natural gas	64.6%	60.1%	27.2%	50.5%
Wood	3.3%	23.8%	61.8%	29.7%
Other	0.5%	1.4%	9.6%	3.9%
TOTAL USED	100.0%	100.0%	100.0%	100.0%

*Highest values are in bold.

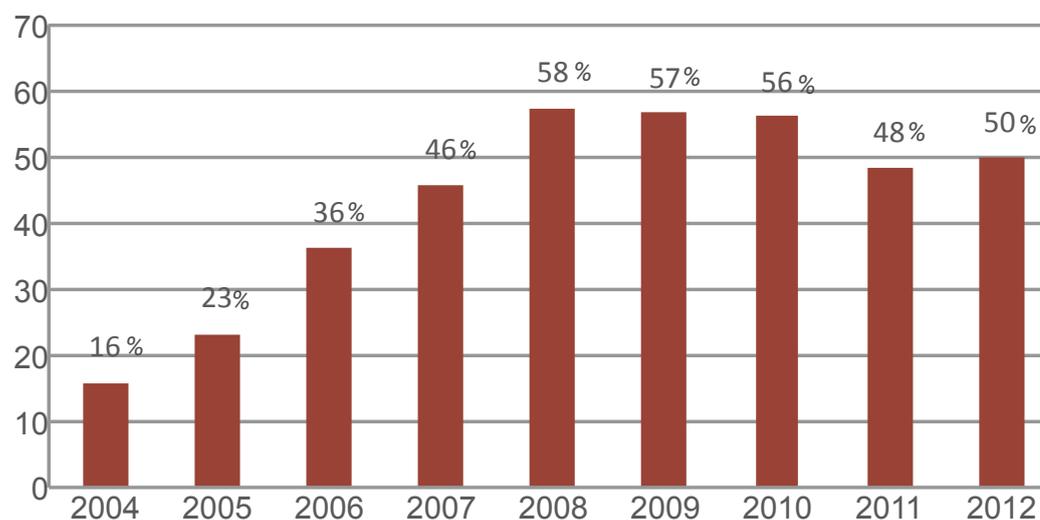
Source: ILCS, 2012; National Statistical Service of the Republic of Armenia, 2014.

FIGURE 4. MAIN TYPES OF ENERGY USED BY HOUSEHOLDS IN ARMENIA FOR HEATING PURPOSES (BY INCOME AND SETTLEMENTS)



Source: ILCS, 2012; National Statistical Service of the Republic of Armenia, 2014.

FIGURE 5. SHARE OF HOUSEHOLDS USING GAS AS MAIN HEATING SOURCE, 2004–2012



Source: ILCS, 2012; National Statistical Service of the Republic of Armenia, 2014.

decade—yet issues of inefficiency, dependency, and poor accountability remain. Improvements in the energy sector included increased availability of electricity and piped natural gas. In the 1990s, electricity service was frequently interrupted and often available for just a few hours each day. In 2004, only 16 percent of the population had access to gas. Currently, electricity service is available 24 hours/day and consumers experience fewer interruptions compared to even a few years ago. At the same time, service interruptions and high costs during the winter season show a need for further service improvements and for mitigation measures for those who struggle to pay for basic energy use.

8. Energy tariffs have fluctuated over the years.

While Armenia's electricity prices remained stable in nominal terms from 2000 to 2009, real prices fell between 2000 and 2013. On the other hand, gas tariffs increased drastically in both real and nominal terms, due to the dependency

on gas imports and prices set by the Russian gas company. In real terms, Armenia's gas tariff increased in the first quarter of 2006 by approximately 50 percent and in the first quarter of 2010 by about 40 percent.²⁹ Further increases took place again between 2012 and 2013, when gas tariffs increased in real terms by 10.6 percent.³⁰

9. Energy affordability and rising tariffs remain a great concern in Armenia. While some progress has been made in reducing poverty, the poverty level was at 32.4 percent in 2012. Reportedly, the most recent tariff increases have expanded the share of poor by 2.8 percentage points between 2011 and 2013.³¹ This estimation does not include potential secondary effects deriving from an increase in the price/scarcity of wood for rural households.

29 World Bank, 2014.

30 Morgandi et al., 2014.

31 Settar et al., 2014, referenced in Morgandi et al., 2014.

10. The FBP is the main social assistance tool for vulnerable households in Armenia. FBP is a means-tested and cash-based social assistance program. In recent years it increased its coverage and improved its targeting. About 6 percent of the population benefits from the program. Given the country's poverty levels, coverage remains rather limited. Eligibility scores consider the amount of energy consumed by beneficiaries, yet not the energy tariff or its increase. Consequently, it makes beneficiaries vulnerable to tariff increases: While tariff rates change, there is no indexation of the social assistance. FBP recipients also pay a reduced tariff for gas, but only if they do not exceed the set consumption ceiling. That, in turn, forces vulnerable families to turn to other energy sources so as not to exceed the allotted amount of gas per month and to continue to qualify for social assistance.

Section II: Findings

ENERGY USE AND SPENDING PATTERNS

11. Armenian households use electricity, networked (natural) gas, portable gas, wood, and manure. Large networks centrally provide electricity and natural gas. Portable gas is purchased either from suppliers who visit small settlements or from gas stations. Wood is mostly purchased from licensed suppliers who have permission to cut trees or collect wood from forests, although some households collect wood from their own properties. Wood is sometimes obtained through bartering, such as exchanging livestock and agricultural products for wood. This practice is more common in rural areas. A few households obtain wood illegally from surrounding forests, although it is difficult for the population to engage in illegal logging, as it is strictly controlled. Manure is mainly collected from residents' own livestock during the year

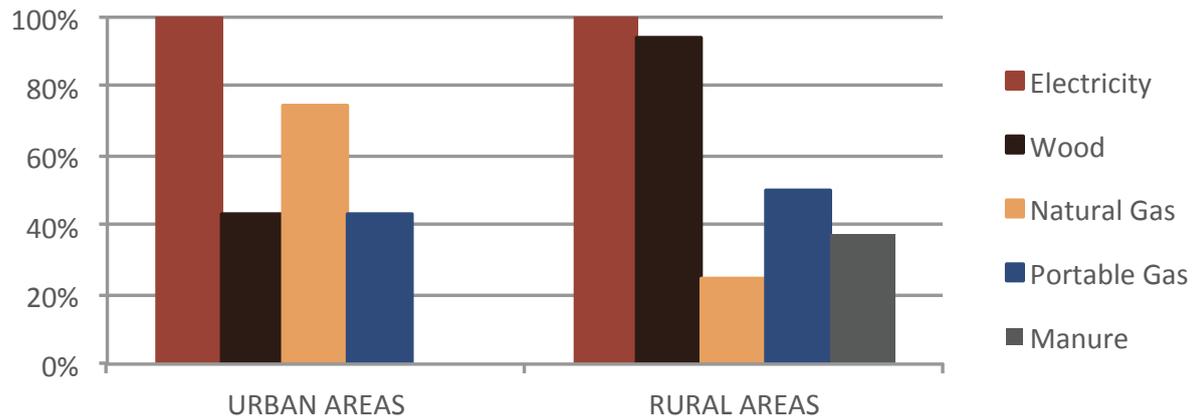
and is prepared as fuel for winter. In some cases, manure is also purchased or bartered.

12. Urban and rural areas have different available energy sources, and also differ in how they use energy. Approximately 45 percent of participants with access to natural gas reported using it as their primary source of heating, and using electricity or wood as their secondary source. In urban areas, electricity and natural gas are mainly used for heating, while in rural areas wood (by around 90 percent of the observed population) and manure (67 percent) are used for this purpose. Even in urban areas, residents living in single-family homes report switching to wood (but not manure) for heating and cooking due to the increase in gas tariffs. For cooking, urban residents largely use electricity and gas, while 80 percent of rural residents rely on wood. Portable gas is used mainly as a supplementary source for cooking by those households that do not have access to natural gas; it is therefore more common in rural areas.

13. Energy consumption in Armenia follows the region's weather patterns, with more energy used and higher expenses incurred during the winter months. Peak consumption for electricity, natural gas, wood, and manure occurs during the heating season. The only energy source that reaches its peak consumption during the summer is portable gas, since it serves as a supplementary source and is mainly used for the cooking and canning activities that typically take place during the summer.

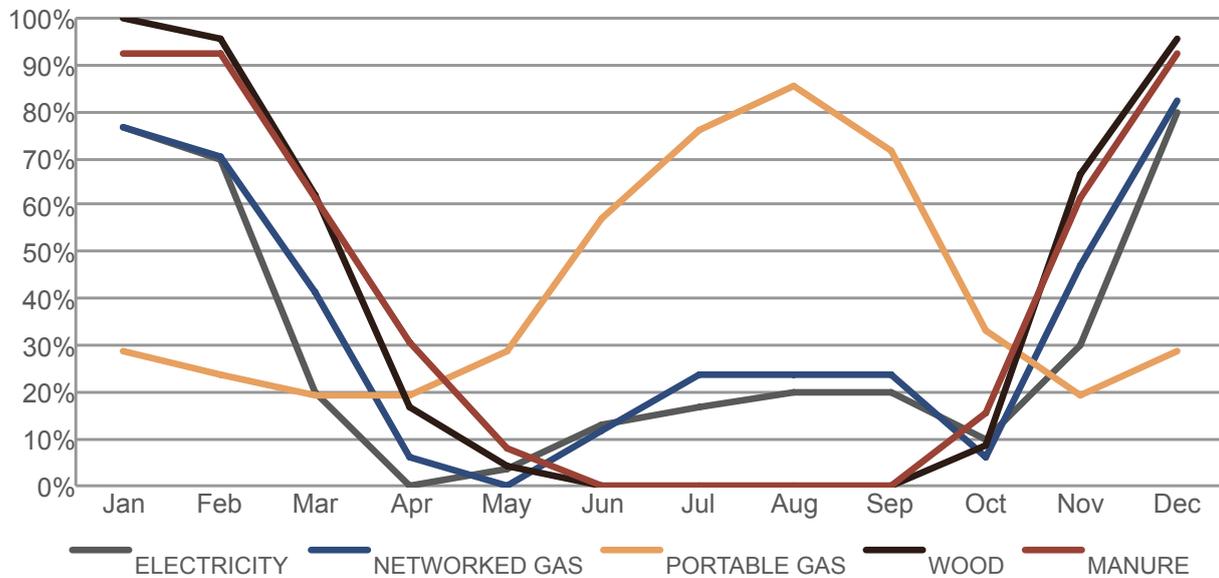
14. Reliance on gas, especially for heating, is higher in urban areas, where the coverage is higher. The qualitative study reaffirms quantitative data that show consumption of gas is higher in urban areas. The use of both electricity and natural gas is higher in winter months, reflecting the need to heat homes. In

FIGURE 6. AVAILABILITY OF ENERGY SOURCES (BY TYPE OF RESIDENCE)



Source: Focus group discussions, 2013–2014.

FIGURE 7. PATTERN OF ENERGY CONSUMPTION THROUGHOUT THE YEAR (BY SOURCE)



Source: Focus group discussions, 2013–2014.

rural areas, consumption of electricity and of networked and portable gas is higher in summer than in urban areas; this is the result of making preservatives and canning food for winter.

15. Consumption of energy is highest during weekends and evenings. Electricity, natural gas, and wood drive consumption during these times, with 70 and 65 percent of observed groups of

the population reporting that electricity and natural gas consumption is at maximum level on weekends, and 90 percent stating that use of electricity, wood, and manure is highest during the evening. Consumption is higher during evenings and weekends because this is when more individuals are home. This is especially true of families with children and working adults. For

FIGURE 8.
CONSUMPTION PATTERNS THROUGHOUT THE YEAR IN URBAN AND RURAL SETTLEMENTS



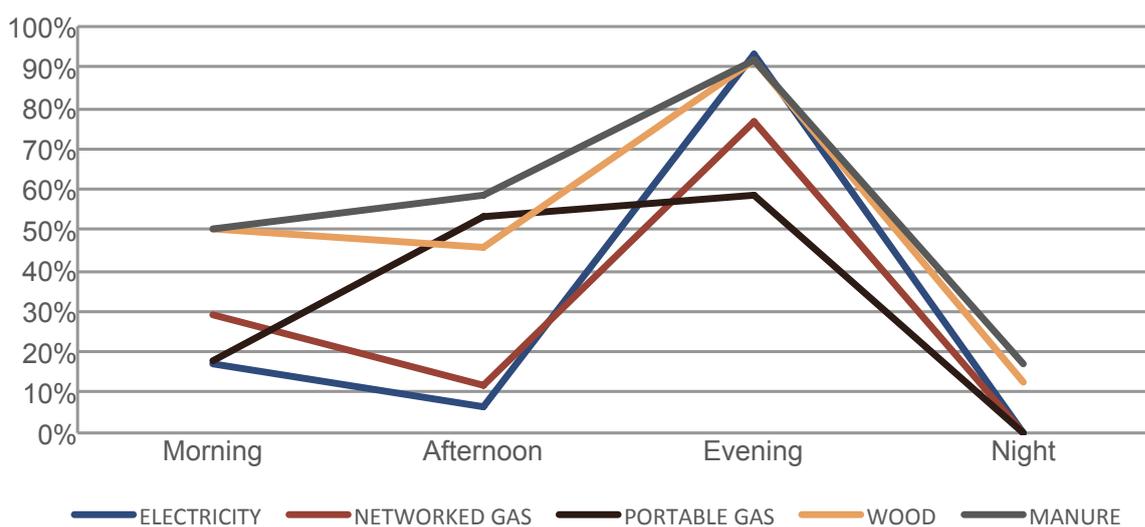
Source: Focus group discussions, 2013–2014.

much of the population, household chores are an evening and weekend task. On the other hand, consumption of portable gas, wood, and manure is distributed evenly throughout the week. Respondents explained that they need to heat their homes consistently regardless of day or time. In addition, families with infants also stated that their energy consumption does not depend

on the time of day and week. Consumption of energy for heating is usually lower during the night, since many believe it is unsafe to leave wood or gas-based heating on overnight.

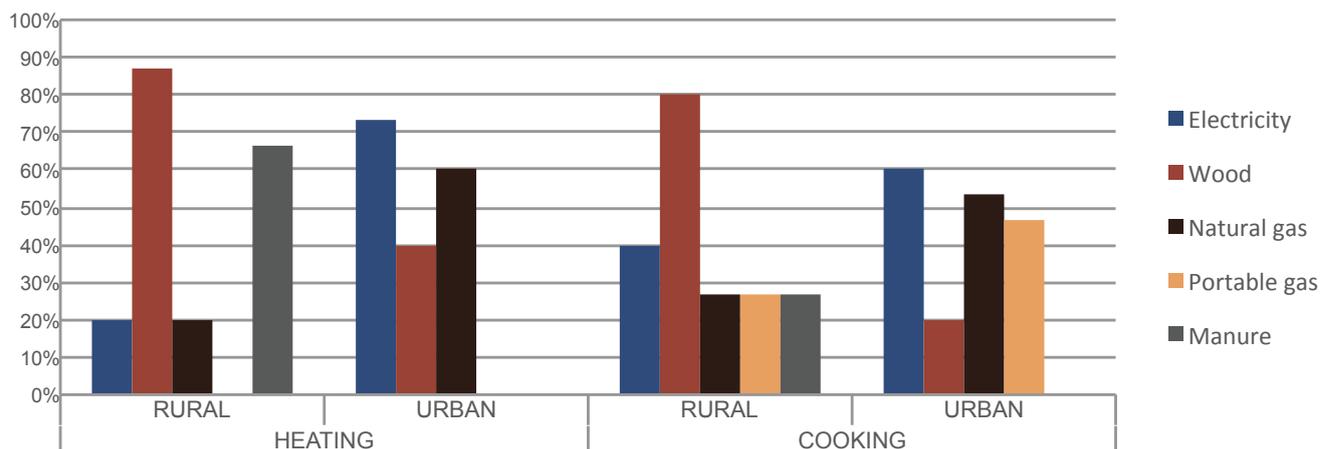
16. The choice of energy source differs depending on income level. Middle-income families typically use electricity for heating and cooking, while low-income families more commonly use wood

FIGURE 9. CONSUMPTION PATTERN DURING THE DAY (BY SOURCE)



Source: Focus group discussions, 2013–2014.

FIGURE 10. ENERGY CONSUMPTION (BY ENERGY SOURCE AND PURPOSE)



Source: Focus group discussions, 2013–2014.

for these purposes. Middle-income families very rarely use manure, which the poor mostly use to save money. The study also indicates that low-income families are less likely to use networked gas, even if they are connected to the grid. Many low-income families stated that they could not afford to use gas.

17. Families that receive social assistance also have different consumption patterns. One of the

eligibility criteria for the FBP is the level of energy consumption by the household. Exceeding the established consumption limit results in loss of eligibility. For example, if a household consumes more than 300m³ of natural gas per year, it is no longer eligible to receive social assistance and pay subsidized prices. Consequently, FBP recipients limit their consumption of electricity and natural gas. In rural areas, both FBP recipients

BOX 10. USING MANURE AS ENERGY

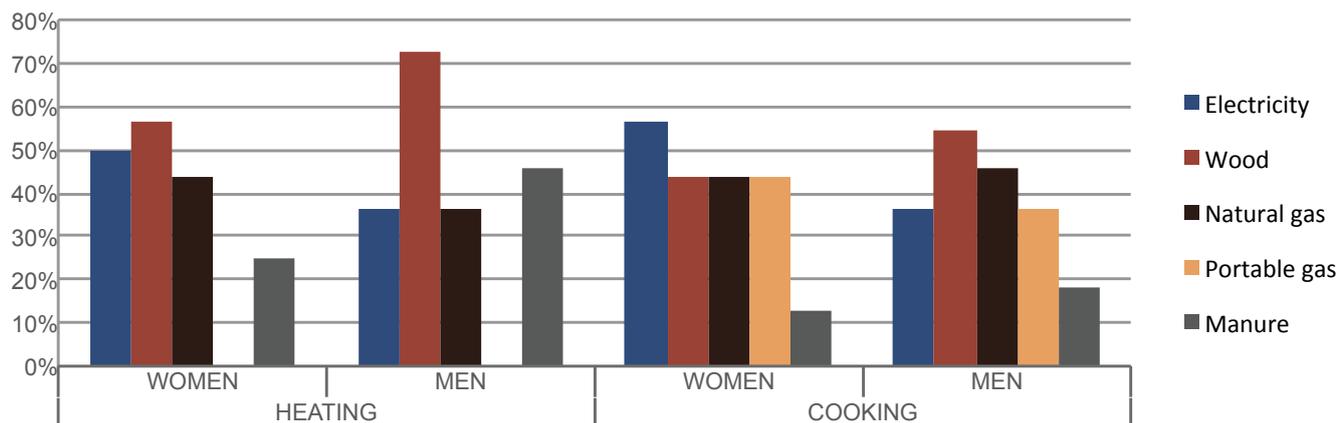
More than 50 percent of respondents (most of them residents of rural areas) reported using manure to supplement wood for heating, due to rising costs of other energy sources. The respondents prefer wood to heat their homes because of its availability and relative affordability. Manure that is collected from one's own stock is almost free and can help further reduce heating payments. However, respondents complained about the smell and filth that results from burning manure.

“We put wood in the stove, put a layer of manure on it, again wood and again manure.... Like butter and bread we put wood and manure with layers, it warms up the house very well, we can survive, what else can we do.” Respondent, 45 years old, rural area



A pile of manure prepared for heating. (Kamo, Shirak region)

FIGURE 11. ENERGY CONSUMPTION PATTERN (BY GENDER AND PURPOSE)



Source: Focus group discussions, 2013–2014.

and other households prefer to use wood as their main source of heating. However, families that do not receive benefits use gas as their second main source for heating and cooking, while those that receive benefits use manure and electricity to save energy.

18. Women and men appear to have different patterns of energy consumption. Women are the main consumers of energy in households, as they perform most of the household chores (with the exception of heating-related tasks). Women use most of the appliances, but men are responsible for heating the house, especially if wood is used

for this purpose. Men are in charge of purchasing and chopping wood. Women, especially those who stay at home, report not heating the homes if they are alone. They describe it as an energy-saving strategy, to heat the home only when men and other family members are home in the evening and on weekends. Overall, women seem to be more cognizant of saving energy and the need to make changes in the family budget when energy prices increase.

COPING STRATEGIES

19. Energy tariff increases pose a substantial



BOX 11. GENDER DIFFERENCES IN ENERGY USE

Women and men have different perceptions of how energy is used. Women cite using more sources of energy and describe using energy for a wide range of purposes. Men, on the other hand, describe mostly needing energy for heating. Women are therefore more nuanced when listing the purpose and variation in the amount of consumption during the day, week, and throughout the year. These differences are probably due to men and women's different household roles and the fact that women spend more time at home than men.

burden on households, particularly vulnerable ones, including FBP beneficiaries. The burden is most significant during the heating season. The majority of low-income respondents and FBP recipients report spending almost the whole amount of their income on energy bills during the heating season. In the summer, households observed in the qualitative study report spending between 20 to 30 percent of their income on energy.

20. Despite the high share of the household's budget designated to energy bills, respondents report paying bills on time to avoid debt accumulation, disconnection, and high late payment and reconnection fees. Respondents indicated that they prefer to borrow money from friends and family (and in rural areas, from the energy controller), or to sell produce from their garden plots or other household items, to pay energy bills if they do not have enough in their typical income stream. Participants who are connected to the networked gas supply report borrowing money more often to pay their gas bills. Some respondents clarified that they do not want to be in debt to the government. Additionally, they feel that they lose their right to complain about service quality or interruptions in service if they become indebted to the energy companies.

21. Participants make a clear link between the rise in energy prices and the need to make cuts in household spending. All households employ a variety of coping measures to reduce energy consumption and energy payments. FBP beneficiaries and the unemployed report using a greater number of coping measures than other population groups. Ninety percent of respondents said that in winter, they reduce the area of space that they heat. About 40 percent change sleeping and bathing arrangements, and 23 percent avoid being at home. For example,

all family members live in one room or children sleep in the same bed. Households in which there are infants, elderly persons, or persons with disabilities—that is, individuals who need extra care—do not cut energy or heating consumption despite heating costs. Eighty-five percent of respondents said they also cut spending on food and clothing. Some explained that they do not buy meat or dairy; reduce their number of hot meals; and consume produce from their garden plots or the canned food they prepared in the summer. It is more common for rural residents to substitute purchased foods with self-produced food, which makes them better able to save cash for energy payments and fuel purchases. Rural residents have also admitted that they must limit making dairy products and instead sell milk to avoid additional energy use, or even to reduce making preservatives for winter. This in turn hinders their income and livelihood options. Both urban and rural residents stated that they must cut spending on their children's education and daycare, as well as spending on family outings, celebrations, and vacations. The population feels the need to find additional employment, including labor migration, to increase the household income and improve their ability to cover expenses and bills.

22. Residents of the 1988 earthquake zone are in a particularly dire situation and are unable to adequately heat their homes in winter. Respondents in Shirak and Lori, the two regions most affected by the earthquake in 1988, demonstrated the highest degree of vulnerability to rising energy costs. The majority of families continue to live in temporary housing that has been in use for much longer than it was originally intended. These temporary houses are poorly insulated and inhabitants commonly use basic

insulation methods, such as taping off windows, vents, and doors, and placing extra rugs on floors and walls. Installation of plastic windows and doors, or using other more effective insulation technology does not work for these homes. While electricity is provided, there is limited access to natural gas in these homes. Due to their poor conditions, networked gas is not even considered in this area. In addition, it is quite hazardous to use wood and manure in such structures because of poor ventilation and degraded building structure, making heating exceptionally challenging. In these regions, employment opportunities and access to land, even for subsistence farming, are also limited.

23. All respondents seek ways to improve their homes' insulation and energy efficiency,

even when measures are limited in scope and effectiveness. Activities to improve insulation and energy efficiency range from lining and covering windows and doors with cellophane and/or insulation tape, to putting rugs on floors and walls, to closing ventilation vents. Installing plastic windows and doors, and in some cases, heated floors, was described as the most effective way to improve a home's insulation and make heating more efficient. The costs of such measures are prohibitively high for the majority of respondents, however. Additionally, old building structures often do not allow for such improvements. The population also believes that plastic windows hinder proper ventilation, which causes humidity and mold.

24. While there have been few substantial

“We have additionally covered the walls with stone on all four sides.”

FEMALE RESPONDENT
50 YEARS OLD, URBAN AREA, SPITAK

“We have reinforced with wood from four sides to make it livable, it is not possible any more.”

FEMALE RESPONDENT
33 YEARS OLD, URBAN AREA, SPITAK

“If you climb the roof you will die, falling down straightly.”

MALE RESPONDENT
63 YEARS OLD, RURAL AREA

“Houses constructed by state government are like three pigs' houses, if you blow it will collapse ... if it is windy the roof blows off.”¹

MALE RESPONDENT
63 YEARS OLD, RURAL AREA

1 “Three pigs' houses” are the government-constructed houses that were built following the earthquake. The residents complained that these houses are poorly built. These are one-story panel buildings that do not have basements. Some of the houses have tin roofs, the others have 3 cm deep penoplast covers. On several occasions, strong winds blew off the roofs and the residents had to go and bring them back and put them in place. Also, cleaning off the snow from the roof is quite dangerous.

differences in electricity consumption due to tariff increases, respondents report a surge in the use of wood and manure for heating. Households state that they have already been limiting electricity consumption for some time, and worry that any further cuts will significantly impact their quality of life. At the same time, households—particularly low-income ones and those in rural areas—increasingly switch to wood and manure for heating; 65 percent of low-income respondents (compared to 25 percent of middle-income respondents) reported switching away from electricity and gas to wood (and to manure only in rural areas). The trend is noted even for households that are networked into a gas supply system. Households with a gas supply report paying more for all energy sources, which in turn forces them to minimize consumption of gas and supplement or even completely switch to wood, and in rural areas, manure.

25. Gas and electricity tariff increases reportedly also drive price increases of wood and manure.³² Concerns about illegal logging in Armenia remain high. While some respondents admitted to acquiring wood illegally, the majority stated that they purchase wood from a licensed seller or receive a permit to cut wood for domestic consumption. Others cut trees in their orchards. Respondents noted a spike in prices of wood since the gas and electricity tariffs increased. Female-headed households reported additional costs associated with paying for transportation and cutting wood that households with men do not incur. Additionally, in a small number of cases in which manure is purchased rather than gathered, the costs also rose due to energy tariff increases.

32 Prices for wood have increased by 20–30 percent since utility tariffs increased in 2013 (Morgandi et al., 2014).

26. Households that heat with wood face difficulties related to the seasonality of expenses; those that purchase small quantities of wood every month are generally more vulnerable and face higher overall costs. Purchasing patterns for wood vary depending on the amount of money available and the storage capacity of the household. Payments are required at the time of purchase; however, rural residents report paying in installments if they know the supplier. Wood prices are substantially lower in the summer, which is when households prefer to buy it. Households that buy in smaller quantities throughout the year do not take advantage of the best price, as the cost of wood can rise substantially in winter. Households that rely on manure prefer to buy it once a month; its foul smell makes them reluctant to store it for too long.

27. Female-headed households report managing payments after tariff increases more effectively. Both male- and female-headed households stated that the new tariffs pose an additional financial burden on their families; however, female-headed households appear to more effectively readjust their budgets and spending priorities. More women than men said they use different coping mechanisms and cut down on energy use. This is most likely related to the fact that women, even those who are not heads of households, are the main consumers of energy and find themselves in a better position to know where they can accrue savings.

SOCIAL ASSISTANCE: THE FAMILY BENEFIT PROGRAM

28. Respondents demonstrate a high level of awareness of the FBP. Overall, the low-income population is more aware of the FBP's eligibility and application requirements than

the middle-income group. The population knows how, where, and when to apply for social assistance. Rural residents complained that they often have to travel to an urban center to apply. A cumbersome application process and transport expenses often prevent people from trying to apply even if they know they qualify, because the initial expenses and bureaucratic hurdles do not justify the meager monthly benefit they would receive.

29. The population believes that the FBP overall is allocated fairly in their community, but they report increasingly stricter eligibility requirements and a lack of clarity in calculating eligibility scores—a process that may be fraught with manipulation. Mostly urban respondents stated that FBP targeting is appropriate and reaches those in need in their community. At the same time, only 40 percent of rural residents believe that FBP allocation is fair. Interestingly, recipients of the FBP are more critical of the program, saying it fails to target the people that may benefit from social assistance. Increasingly strict eligibility requirements lead people to underreport housing conditions, property ownership, informal income sources, and, in some cases, even marital status. Rural residents, for example, indicated that owning livestock and/or subsistence farm plots may disqualify them from eligibility, even when they meet other criteria. Because there are different weights assigned to each criteria and these weights change, the population is often unclear on how the final eligibility score is calculated. Consequently, the population believes it is at the social assistance program officer's discretion to determine the final eligibility score and, as a result, s/he may

manipulate that score at his own will. As one male respondent in a rural area explained: "Everything is in their [the social assistance program officer's] hands. If they want to give somebody [benefits] they will do it, if they don't, they won't give."

30. Women tend to both apply and qualify for the FBP more often than men. This suggests potentially higher vulnerability among female-headed households, but, on the other hand, also suggests cultural norms that make it more acceptable for women to seek social assistance. In a household where both a man and a woman qualify, the woman is more likely to apply because it is believed she is more likely to be accepted. Additionally, respondents explained that women are more patient and persistent in the application process, while men give up easier when faced with bureaucratic application requirements.

31. Even after applying multiple coping strategies, FBP beneficiaries report spending most of the benefit amount on energy bills during the heating season. FBP recipients switch away from gas to wood and manure more than any other population group. This is largely driven by the fact that FBP recipients cannot exceed a set amount of gas consumption to qualify for the social assistance. To continue to receive assistance and be able to heat their homes, FBP recipients reduce the overall space to be heated and insulate their homes. In sum, FBP helps beneficiaries cope with their expenses but does not correspond with greater energy access or improved heating and energy conditions in their homes. In some instances it can even have the reverse effect, with FBP recipients limiting their energy consumption even further.

RELATIONSHIP WITH ENERGY SECTOR PROVIDERS

32. Energy company operations and quality of service were assessed as average, with lower ratings in rural areas and areas without access to networked gas. Households without access to networked natural gas rely more on electricity; as a result, these segments of the population more acutely experience poor or interrupted electricity service. This, in turn, results in lower assessment of services. Overall, respondents across different groups complained about frequent electricity fluctuations, regular disconnections, and the poor quality of gas. Many admit there have been some improvements in energy provision since the 1990s and early 2000s, but say challenges persist. Rural residents additionally complained about the lack of clarity in billing and slow repair efforts in the event of interruptions.

33. Respondents know their local energy provider and how to reach it, yet interactions with providers are quite restricted and consumers rarely approach companies with questions or concerns. The population does not like to

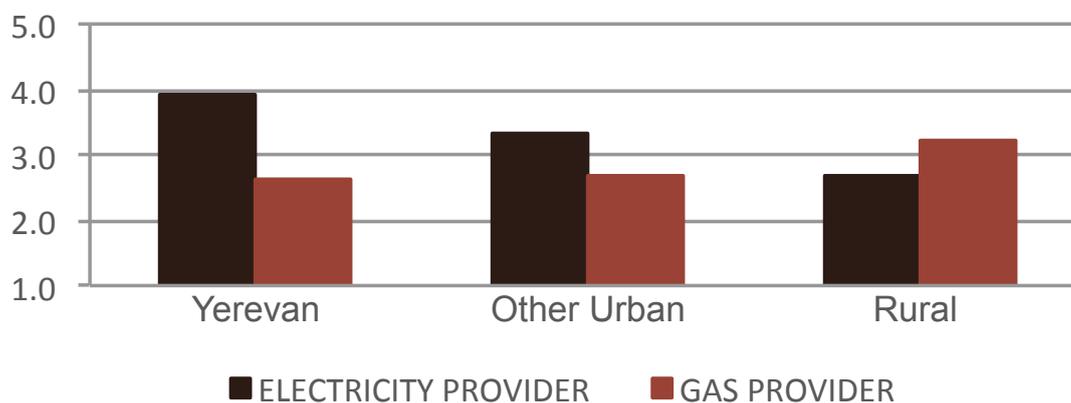
contact their energy providers, saying it is hard to reach them; representatives are often rude and unhelpful; and information is unclear. In rural areas, a local controller may provide information about payments and interruptions. The controller may even help with payments or arrears, serving as a financial middleman. The controller is often key in moderating relations between consumers and the provider. Television, radio, and newspapers are cited as the main sources of information about tariff increases or any other associated changes in service provision.

34. Women are more likely to contact energy providers for information or to address a claim, with a slight exception in rural areas. There, women are less likely to interact with a controller, because they are not responsible for payments. Men tend to handle energy payments or negotiate late payments. Women rated energy company performance higher than men.

ACCEPTABILITY OF ENERGY REFORMS

35. Respondents are aware of energy tariff reforms, but the prevalent opinion across

FIGURE 12. EVALUATION OF ENERGY SERVICE PROVIDERS (5-EXCELLENT, 1-POOR)



Source: World Bank field work, Armenia 2014.

all groups is that a rise in energy tariffs is unjustified. Respondents state that for tariff increases to be justified, incomes would have to increase. Participants largely prioritize affordability over quality. Respondents state that even improvements in services would not make further tariff increases acceptable. The exception is middle-income respondents, half of whom indicated a willingness to pay if prices rose by 5 percent under the condition of improved quality of service.

“Around 30 percent of the population uses electricity with very low voltage power (reaching only 160–170 volts instead of 220 in evenings).

The wires are 25–30 years old, the stations are very old, and poles are out of order.”

RURAL COMMUNITY LEADER
SHIRAK REGION

36. If tariffs increase again, respondents stated that they will continue to use energy in the same volume; any further limitations on energy consumption will adversely affect their quality of life. Inability to pay any more and the inability to further cut consumption were cited as the key reasons why the population does not support tariff increases.

37. Additionally, respondents doubt the success of energy reforms or improvement in services. The earlier tariff increases resulted in few significant improvements in the quality of services. In some cases—for example, with gas services—the population reported a further decline in the quality of gas and provision of

services. Respondents also believe they have no way to impact decision-making processes in the energy sector.

38. Women demonstrated a lower interest in and awareness of energy sector reforms. All respondents reported that men show more interest in the reforms and follow the news on television, radio, or newspaper. Women stated they are too busy with their household chores and do not have time to follow or understand the reforms and their implications.

Section III: Recommendations

39. The qualitative assessment points to several issues that could be addressed to mitigate against the impacts of energy tariff increases.

In particular, the GoA may want to:

- Consider mitigation measures beyond the FBP that can support a broader part of the population affected by energy price increases. This could mean supporting livelihood opportunities for the poor; finding ways to reduce the costs of education for those who cannot afford it because of energy price increases; or supporting energy-efficiency measures. Focus in particular on vulnerable households, including female-headed ones. Consider making credit available for families who want to make energy-efficiency investments but cannot afford the up-front costs.
- Support areas affected by the 1988 earthquake through programs to improve housing/provision of permanent housing; increase the energy efficiency of current housing; and increase benefits for those in this area, given their greater energy costs.
- Further study households' reliance on wood and other sources of energy (including

manure, corn stalks, and so on); the costs of using these sources of energy (in terms of time and money); and the impacts on the environment. Develop community-based activities to increase the availability and warehousing of wood from legal sources and to decrease the price of wood in remote, rural communities, and rural communities near forests where logging is illegal. Consider supporting wood warehousing for low-income rural residents.

- Determine the implications of the limits on gas usage for FBP participants and, if necessary, remove the limit for these beneficiaries.
- Set up a process to monitor gas and electricity service interruptions. Improve the quality of service provided to customers and set up mechanisms to inform customers of improvements in service quality. Consider involving customers in reporting service interruptions and low-quality service.
- Provide customer service training for controllers and other energy service provider staff that interact with the public. Develop processes for customers to assess the quality of customer service.
- Reflect regional and seasonal variations in household energy expenditures in the FBP to ensure that social assistance is effective in alleviating the energy expense burden for all its recipients (such as modifying the FBP so that higher payments are made in the winter; a second option is to smooth tariffs so payments are not greater in the winter and people do not get into debt).

- Expand payment plan options to include payment installments stretched out through the year can help the most vulnerable consumers pay their energy bills without falling deeper in debt, especially during the most financially stressful time of year.
- Improve communications around FBP and eligibility score calculations and address concerns over fairness of eligibility for the benefit.

Belarus³³

1. This summary presents findings from a political economy analysis of the district heating sector in Belarus and a qualitative assessment on the impacts of and attitudes toward the heating tariff reform conducted between December 2013 and May 2014. The political economy analysis is based on 39 key informant interviews with representatives of government authorities, civil society organizations, district heating companies, consumer associations, and the media. The qualitative assessment is based on 18 FGDs with low- and middle-income households. Separate FGDs were conducted with households that receive social assistance. All FGDs were segregated by gender and age.

2. The main findings are as follows:

- Poor district heating users who live in old apartment buildings are especially vulnerable to tariff increases, as they

33 This summary note was prepared by Ecaterina Canter, Ezgi Canpolat, Izabela Leao, Klavdiya Maksymenko, Nicolas Perrin, and Sophia V. Georgieva. Data collection and initial analysis was carried out by Center of System Business Technologies SATIO. This note is part of a series of qualitative assessments carried out for the energy sector by the Europe and Central Asia Social Development Unit in FY14. The task was led by Michelle Rebosio.

cannot control their consumption of heat. Because old buildings are poorly insulated, respondents who live in these buildings pay twice the amount to heat the same surface area than those who live in newer buildings.

- Energy affordability is not the main driver of opposition to reforms. Opposition is rooted in a legacy of social contract, where energy services are regarded as an entitlement the government should provide. According to deeply entrenched societal beliefs, the state has a paternalistic obligation to provide services such as heating, and at low prices.
- Middle-income households regard utility bills as manageable and they do not apply measures to cope with energy prices, while some of the low-income households report cutting expenses on food and clothing to afford energy. This is especially the case during the winter months.
- Belarus has an effective social support system that can be used to mitigate poverty impacts. However, the available types of social assistance are stigmatized (respondents described people who received assistance as “alcoholics” and “spongers”). Households therefore do not automatically perceive social assistance as a mechanism for helping with energy expenses.
- Households that live in apartments that are served by multiservice utility companies complain about unclear bills. They pay one bill for a number of services (electricity, water, heating, and so on), which makes it difficult to follow what is spent on each service.

- Respondents prefer not to contact energy providers. The low level of interaction between consumers and providers is a result of low prices for energy services and low expectations for service quality.

Section I: Belarus Country Context

3. The government of Belarus (GoB) has embarked on district heating tariff reform to improve the financial viability of the heating sector. The heating subsidies for residential consumers, along with the heating sector's high dependency on imported natural gas, have put a large fiscal burden on the national budget. The GoB aims to gradually eliminate subsidies and increase residential tariffs. Beginning in 2014 the cost of heating, hot water, natural gas, and electricity will grow annually. Price increases will not exceed US\$5 per year and will be consistent with annual nominal wage increases.

4. In Belarus, 61 percent of the population relies on district heating for heat, and less than 1 percent of this demand is met by private companies. The use of district heating is highest in urban areas, at 81 percent. The heating sector is largely dominated by the public companies. The main providers of district heating services are Belenergo State Association and multiservice utilities (its Russian acronym is ZhKHs). Belenergo is a state-owned company that provides district heating and electricity services in Belarus's big cities. ZhKHs are municipally-owned housing authorities; they provide district heating services in big cities and smaller towns that are not covered by Belenergo.

5. The heating tariff reform will contribute to the country's economic sustainability. As a result of increasing tariffs and the phased elimination of subsidies, the GoB will experience increased fiscal savings. The Ministry of Finance will be able to allocate public financial resources to strategic priority needs, instead of covering heating sector losses. The business sector will experience gains as it will not pay overpriced tariffs, which are currently imposed to sustain cross-subsidization.

6. Citizens are not sufficiently aware of the reform process. There are no strategic communication efforts about the reform process and the public is largely uninformed. Nonstate actors are not included in the reform process, with the exception of some business representatives.

7. Opposition to heating reforms is rooted in a legacy of social contract, where energy services are regarded as an entitlement the government should provide. According to deeply entrenched societal beliefs, the state has a paternalistic obligation to provide services such as heating. Citizens believe they are entitled to low-cost service delivery.

8. Belarus has an effective social support system that can be used to mitigate the negative impacts of price increases on vulnerable households. Available social assistance mechanisms in Belarus include a targeted monthly social assistance benefit and a nonrecurring social benefit, which can be used to cover utility payment arrears. Income level is an important eligibility criterion for receiving state social assistance. The GoB also plans to provide discounts on utility bills to households that spend more than 15 percent of their income on utility bills.

Section II: Findings

ENERGY USE AND SPENDING PATTERNS

9. In Belarus, households generally use district heating, electricity, natural gas, and wood. Apartments and single-family detached houses differ in how they use energy. The majority of households in apartment buildings use district heating for heating and hot water supply. Respondents who live in single houses use gas and wood for heating and electricity for heating water. Electricity is mostly used for lighting. For cooking, most of the households use gas stoves and electric appliances such as such as microwaves. Some respondents who live in apartments with district heating report that they use gas stoves as a supplementary source of heat in cold temperatures. These respondents turn up the flame to heat the air, which is very dangerous.

10. Respondents who live in old apartment buildings report spending more on district heating than residents of newer buildings. Apartment building tenants' district heating bills are calculated by dividing the total amount of heating consumption in the entire building by the individual apartment size. The old apartment buildings are poorly insulated, and respondents who live in these buildings pay twice the amount to heat the same surface area as those who live in newer buildings.

11. Energy expenses fluctuate with the seasons, with more energy used and higher expenses incurred during the winter months. The heating season in Belarus starts in mid-October and ends in mid-April. Households report especially higher heating expenses between December and February. They state that they spend more on electricity during the winter, as they use more

electricity for lighting because of less daylight time.

COPING STRATEGIES

12. Low-income households apply several measures to cope with energy prices, especially during the winter months, while middle-income households rarely use such measures and believe that utility bills are manageable. Low-income households state that they reduce spending on food and consume less meat, fish, and fruit. Low-income respondents also substitute purchased food with food grown on farmland and dacha.³⁴ Another coping mechanism of low-income households is to cut spending on clothes. Respondents state that they rarely buy new clothes, and when they do, they prefer cheap, secondhand items. Women respondents mention reducing spending on cosmetics as a coping mechanism. Low-income families with

³⁴ Dacha refers to a small Russian house in the countryside that is especially used in the summer.

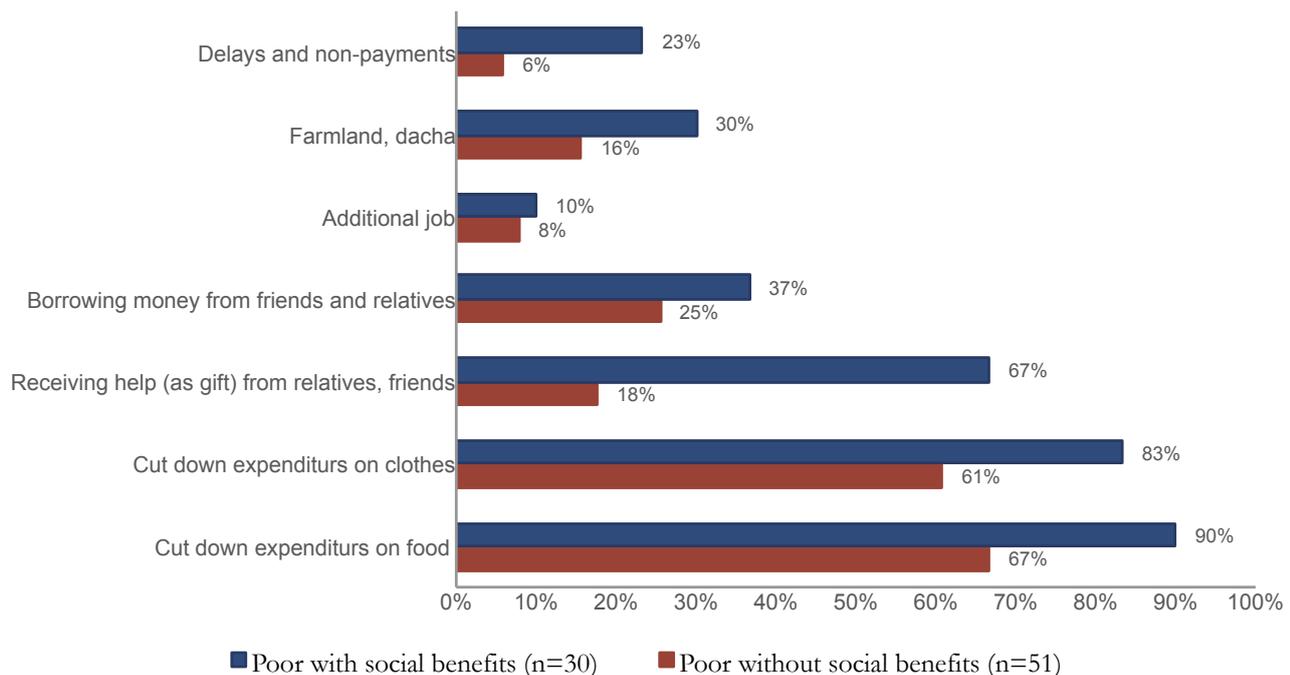
children, especially female-headed households, receive help from their relatives who do not expect anything in return. Some of the low-income households report working additional jobs in order to pay utility bills. Respondents who receive social benefits more often apply the coping mechanisms mentioned above than households that do not receive assistance.

“There is no feeling of security. You have to plan all the expenses. You can’t afford to buy anything and you can’t save money.”

FEMALE FGD RESPONDENT

13. Respondents generally prioritize utility bill payments, and it is rare to delay payment or not pay at all. To avoid arrears, respondents

FIGURE 13. COPING MECHANISMS SOURCE: FOCUS GROUP DISCUSSIONS, 2013–2014.



Source: Focus group discussions, 2013–2014.

pay their utility bills first and distribute their remaining resources among other expenses. In rare instances, low-income households cope by delaying payment or not paying at all. These households say reasons for nonpayment and payment delays include illness, large payments for the installation of gas meters, the need to buy clothes for children, and unemployment.

14. Women and men use different mechanisms to cope with energy expenses. Men more frequently report using coping strategies such as working more or changing jobs, while women tend to seek help from relatives and friends. Women are also more active in reducing spending on food.

15. Households without individual metering lack incentives to save energy. Households that have individual meters for gas, water, and electricity try to save energy in order to reduce costs. If individual metering is not provided, the tariffs depend on the total consumption of energy in an apartment building and the size of the tenant's apartment. Respondents without individual metering lack incentives to save. They use measures such as window insulation, not to reduce heating costs but to increase indoor temperatures and improve their living conditions.

"I don't have to save heat. My neighbor saves energy and pays 15,000–20,000 rubles (around US\$2) less than I do, but he has to wear warm clothes while I can wear a T-shirt."

FGD RESPONDENT WITH
INDIVIDUAL METERING, KOBRIN

SOCIAL ASSISTANCE

16. Focus group respondents who do not receive social assistance perceive cash assistance with some level of stigma. Many of them state that such assistance is mostly used by groups they describe as "alcoholics" and "spongers" who do not work, and associate a certain level of shame with receiving it. Non-recipients state that they prefer to rely on earned income or other coping strategies to manage energy payments before resorting to cash transfer social assistance programs.

17. Social assistance recipients and poor groups who apply for assistance argue they are treated with prejudice at social assistance institutions. Respondents mention that some officials who work at social assistance institutions are disrespectful to them and make statements such as, "You should not have had children if you are unable to financially support them."

18. Respondents and social assistance workers complain about the effectiveness and targeting of social assistance. They state that some people who do not really need social assistance hide their incomes and the details of their family situations in order to be eligible for targeted social assistance. According to the social assistance providers, it is very difficult to uncover such applicants and to legitimately deny them assistance.

19. The majority of social assistance beneficiaries who receive monthly allowances prefer to get this benefit in the form of cash so they can freely use it. In contrast, most of the respondents who do not currently receive such benefits consider noncash benefits (bill discounts) the best form of support for energy payments. They believe that noncash support

BOX 12. BENEFICIARIES OF SOCIAL ASSISTANCE PREFER CASH

Beneficiaries of cash subsidies are mostly female-headed households and families with many children. These respondents state that they spend most of the assistance on expenses for their children. Families usually apply for assistance at the beginning of the school year, when they incur higher expenses associated with preparing children for school. The assistance is mostly spent on clothes and footwear—the substantial purchases that the household is normally unable to afford. They also spend assistance on food or medication. Respondents state that they prefer cash assistance because it is flexible and can be used for different purposes.

can be easily accessed by broader groups of households, who may find heating unaffordable after tariff increases.

20. Women tend to get help from state social assistance providers more often than men, as they are more active in seeking help from others. Generally, women are the main beneficiaries of social assistance partly due to the specifics of family structure (single women with children, families with many children). Usually, the absence of a husband as the key provider leads to the need to seek help from state organizations.

ACCEPTABILITY OF ENERGY REFORMS

21. Respondents lack adequate information about tariff increases and believe that rising prices will benefit private interests. Only a few participants know about tariff reforms in the energy sector. Respondents perceive reduction of cross-subsidies as a positive way to reduce pressure on industries; however, respondents are skeptical that the population would benefit from the elimination of subsidies. Respondents believe that the reduction of cross-subsidization would only be profitable for industries.

22. Respondents have different attitudes toward tariff increases. Recipients of

social assistance report that they would be significantly challenged if prices increase 10–15 percent. They state it will be impossible for them to afford energy if prices increase 25 percent. Eleven percent of low-income respondents who do not receive assistance state that a 25 percent price increase will be acceptable, while 25 percent of middle-income respondents said that such an increase will be acceptable. Low-income respondents argue that payment delays will become more common should heating prices increase.

RELATIONSHIP WITH ENERGY SECTOR PROVIDERS

23. The majority of respondents have minimum interaction with energy providers. District heating users do not generally interact with providers. The low level of interaction between consumers and providers is a result of low prices for energy services and low expectations for service quality.

24. Respondents are generally satisfied with services. The majority of households are satisfied with the quality of heating. Only a few respondents complain about low temperatures at home (below 18°C). Complaints about low indoor temperatures are associated with periods

BOX 13. INTERACTIONS BETWEEN CITIZENS AND ENERGY PROVIDERS

An FGD respondent from Bobruisk interacted with the service provider regarding high heating bills. When he asked for clarification, the charging procedure was explained to him. He was told that every section of the building had its own meter and that billing was based on this metering. The building in which he lives is special because there are nonresidential tenants at the first floor (that is, a bank and shops). The meter is common in the apartment; it measures the heat consumed by the nonresidential tenants and the private apartments. The respondent was told that the nonresidential tenants are charged higher tariffs. He was unsatisfied with this explanation. He believes that the service company charges the tenants more compared to nonresidential tenants. The service provider did not provide information on the method used to distribute the expenses among the apartments and the nonresidential tenants. Because of this experience, the respondent does not trust the service provider.

of intensely cold weather and with periods shortly before the heating season starts and after it ends. Some respondents also complain about occasional overheating when the weather is warm.

25. Respondents complain about unclear bills, but they prefer not to contact providers regarding billing. Respondents have vague knowledge of bills and think it is difficult to get clear answers from the service providers. The majority of payments for public utilities (for example, waste management, water heating, and district heating) are included in one bill, which is paid to a multiservice utility company. The unified bill provides some information about the payments for each service; however, respondents usually do not follow the billing details and only pay attention to the lump sum.

26. Female respondents are more involved in interactions with service providers. Women are also slightly more interactive with service providers. There are more examples of women interacting with heating sector institutions regarding temperature and quality of services.

Section III: Recommendations

27. Implement targeted communication mechanisms directed toward the population in order to promote greater sector knowledge and increase the acceptability of tariff increases.

Publicly address issues such as the heating sector's transparency and effectiveness; the potential growth of the district sector if subsidies are to be eliminated; the unfairness of the current subsidy system; and the long-term benefits of a heating tariff reform. The background of a utility bill is perceived as the most convenient place to communicate practical information. Local



Background of a utility bill in Pinsk.

newspapers are an important communication channel for small settlements. Internet sites are also perceived as an important communication channel. Utility webpages should be simplified and information should be clear and easy to access.

28. Adopt regulatory measures and capacity building for multiservice utilities and local authorities to increase the heating sector's organizational efficiency and transparency.

Suggested actions include: (i) technical assistance on price setting, practical mechanisms to enhance energy-efficiency activities, tools and platforms for increased information accessibility, and feedback mechanisms for consumers and service providers' interactions; and (ii) policy support on the establishment of benchmarking and performance indicators, professional training, incentives to perform, and the creation of formal spaces to increase citizen–government interaction at the local level.

29. Introduce the ability to pay for heating in installments to make it easier to cope with higher expenses during the heating season.

The heating season is the most stressful period for households dealing with increased energy payments. Heating tariff increases would intensify the burden on households and worsen their quality of life. Introducing the ability to pay in installments would lessen the burden of heating expenses during the heating season.

30. Increase tariffs gradually to give households time to adjust their energy consumption patterns and restructure expenses, as well as to increase motivation to invest in energy efficiency. Further price increases should be accompanied by an enhanced energy-saving education program (that

could include information on using energy-saving bulbs and how to efficiently use appliances) and the promotion of energy-saving behavior.

31. Create conditions for heat-saving behavior and investments.

Heat-saving behavior would be promoted only if specific incentives were introduced, such as individual metering. Although individual metering and regulation are perceived by residents as the best way to control heat, readiness to invest in them remains quite low.

32. Enhance existing targeted social assistance to improve accessibility and coverage for poor and vulnerable households.

As the tariff increase would impact not only the poorest but also middle-income households, specific measures should be adopted to provide targeted assistance for households struggling to pay for public utilities.

33. Promote interaction between the population and public utilities by providing feedback channels for issues like bill clarity.

Increased social accountability of public utility companies could include the comprehensible information on the billing process as well as educating the population on existing measures and control options. The population's feedback on the quality of heating—including cases of under- and overheating—should be sought.

Section IV: Ethnographic Interviews

ETHNOGRAPHIC INTERVIEW: SINGLE MOTHER

Kate is a single mother who lives in Bobruisk. She is 29 and her daughter is 4 years old. Kate works as a teacher in the kindergarten her daughter attends. Her monthly salary is currently below the minimum subsistence

budget for two people. Kate cannot change her job at the moment, because she does not have anyone to babysit her daughter in the event she has to work on weekends (as a shop assistant).

Kate lives in a two-room apartment on the first floor of an old apartment building (built in the 1960s–1970s). She replaced two windows (in the kitchen and her child's room) using the money she received for her maternity leave. She says she is currently unable to make any other energy-efficiency investments. The living conditions in her apartment are normal (23°C), but she would prefer if her home were warmer.

Kate has received targeted social assistance from the state since December 2013. She receives 700,000 rubles per month. After she receives the assistance for six months, she can reapply for it only one year after she has stopped receiving benefits (it is not reasonable to apply earlier, because the income for the respective months when she received targeted assistance equals the minimum wage).

In order to meet her monthly expenses, after getting her salary Kate usually pays regular bills (public utilities, Internet, phone, television, kindergarten fees, transport ticket), which together amounts to almost 1 million rubles; the remaining amount is spent on food. She pays around 200,000 rubles for public utilities (excluding electricity), out of which heating accounts for nearly 70,000 rubles. Winter is the most stressful period for her, not only because of her public utilities expenses, but also due to the fact that her child becomes ill more frequently and prices increase on food. She has to buy only the most basic products, such as cereals, potatoes, dairy, and bread. In the summer Kate tries to make fruit and vegetables

preserves to make healthier meals in winter. Kate is concerned with the recent increase in kindergarten fees. She is almost unable to afford clothes for herself and often buys secondhand clothes for her daughter. Usually she buys clothes and footwear for her child in the summer months.

Kate is not interested in the detailed analysis of her public utilities bills, although she has been active in resolving problems with the utility company. While on maternity leave, she tried to contact utility companies and local authorities concerning problems with her building (it needs capital repairs and the tenants do not know anything about a planned start date). Currently she cannot be involved in these issues, however, as it is too time consuming.

ETHNOGRAPHIC INTERVIEW: RETIRED WOMAN LIVING ALONE

Ludmila is a 58-year-old woman. She lives alone in a three-room apartment in Smorgon. Ludmila has a vocational education. She used to work in trading and has more than 25 years of experience. Due to low salaries, she now receives a small pension of nearly 2 million rubles. In the summer she gathers and sells berries; in the spring she earns extra money selling flowers. This additional income helps her deal with her public utilities expenses, which she pays for on time.

Ludmila replaced two windows in her apartment several years ago, after she received some money from selling her mother's apartment. She only replaced windows in the northern part of the apartment, which was the coldest. She prefers old windows as they offer a more comfortable indoor climate. The new windows smell and result in increased humidity, which is

quite bad as she lives on the first floor. Ludmila regrets not insulating the walls from the inside. One of her walls that borders with the entrance is quite cold. Ludmila has to hang a carpet on that wall to keep it warm. Generally the temperature conditions are satisfactory. Ludmila had her radiators cleaned this winter. She says she complained about them during several heating seasons but did not risk cleaning because she was afraid it would be a dirty process. However, the procedure was quite clean. As she observed, the radiators did not offer proper heating because of the dirt that had collected inside. She was satisfied with the quality of the work done and temperature conditions have improved.

ETHNOGRAPHIC INTERVIEW: A FAMILY WITH SIX CHILDREN

Helena and her husband Mikhail have six children. They have lived in Smorgon for 3–4 years. They built an apartment with the help of a preferential loan. Their living space is composed of two apartments (a two-room and a three-room apartment that were merged together). Helena had to leave her job recently. Now she is unemployed and it is very difficult for her to find a new job. Mikhail is in the military and earns a salary of about 5 million rubles.

The apartment has an individual heater and is heated by natural gas. The gas bill is quite reasonable, around 100,000 rubles. The family does not try to save gas, as the indoor conditions for their children are their priority. The family has to insulate windows before the heating season. They do not consider investing in other energy-efficiency measures, as they lack the financial resources to do so.

The family has received social assistance since the previous fall. The reason they applied

for it involved the difficulties associated with preparing children for school. The application procedure was quite long. Mikhail mostly dealt with the process of collecting documents. The process was very difficult; it took the family about one month to collect all the documents. They received around 1 million rubles from August till January. As Helena is now unemployed, in order to apply for social assistance she would have to get a job, which she thinks will be difficult to do. As she left her job on her own accord, she is afraid that she will not be able to register as unemployed now.

Helena dislikes dealing with the organizations that provide social assistance. She says she does not like to be perceived as someone seeking help. She prefers to be independent and rely on her family's own resources to raise her children. With respect to prospective social measures, Helena prefers to receive noncash subsidies. Knowing that she had a discount on public utilities would make it easier to deal with other expenses. She also wishes that the process of applying for noncash subsidies would require collecting fewer documents.

Bulgaria³⁵

1. This report presents findings from a qualitative assessment on impacts of and attitudes toward energy tariff reforms in Bulgaria that was conducted between November 2013 and March 2014.

³⁵ This summary note was prepared by Sophia Georgieva. Data collection and initial analysis were carried out by Vitosha Research. This note is part of a series of qualitative assessments carried out for the energy sector by the Europe and Central Asia Social Development Unit in FY14. The task was led by Michelle Rebosio. The note is also part of the ESW on Energy Affordability in EU–11 countries led by Caterina Ruggeri Laderchi and Nistha Sinha.

2. The main findings are as follows:

- Respondents from both low- and middle-income groups find it necessary to reduce basic expenses such as food, clothing, and to inadequately heat their homes in order to cope with energy bills; they believe that further tariff increases are likely to have a strong impact on their basic needs.
- Heating expenses are the highest for district heating users who reside in big cities and who also lack viable alternative sources for heating. At the same time, rural and small-town residents are strongly affected by electricity tariff increases. They intensively use electricity to heat water, produce subsistence food (irrigation, refrigeration), and for primary or supplementary heating.
- Public opposition to reform is to a large extent rooted in perceptions of bad sector governance and in a lack of understanding the justification for tariff increases. The majority of respondents relate tariff increases to the corrupt and profit-seeking behavior of monopolies and private investors.
- Electricity and district heating users feel powerless to clarify bills, report problems with service, and pursue other grievances with providers, which enhances their resentment of tariff increases.
- A very limited proportion of poor households benefit from the heating allowance program. The program is perceived as having a very difficult application procedure and overly strict eligibility criteria. Eligibility for the program is especially difficult for informal and seasonal workers; a majority of Roma respondents belong in the latter group.

- Cash transfers and energy-efficiency support are both considered effective measures to support energy affordability as tariffs increase. Employment creation, higher salaries, and pensions are also viewed as crucial to ensuring energy affordability in the long term. Currently, study respondents are concerned that energy prices are scheduled to increase while their incomes remain stagnant or have even declined due to job loss or salary reduction.

Section I: Findings

3. Findings in this qualitative assessment are based on FGDs and interviews with household members and key informants from national and local social assistance agencies, the heating accountant office, and the district heating company. Twenty-three FGDs were held in six regions of Bulgaria with low- and middle-income households.³⁶ Additionally, eight key informant interviews were conducted with social assistance, energy company, and civil society representatives; three ethnographic interviews in households were also conducted (included in Annex I).

4. The qualitative research presented here was conducted as part of a three-country study on energy affordability in the EU-11, which also includes Romania and Croatia. As new EU members, these three states are in the process of implementing energy reforms compliant with the third energy package of the EC (European Commission, n.d). These include raising electricity, gas, and district heating tariffs to cost recovery level, introducing competitive markets for electricity and gas, and investing further in renewable energy sources, among others.

³⁶ Low-income households were recruited to represent the bottom 40 percent; middle-income households were recruited to represent the third wealth quintile.

5. Energy market liberalization has not progressed as fast in Bulgaria as in other new EU member states. Even though electricity and district heating tariffs are among the lowest in the EU, initial reforms have drawn significant public opposition. In January 2013, a rise in electricity tariffs provoked mass protests across the country and led to the government's resignation. A second wave of protests began in June 2013 and included a demand for greater transparency in energy policy decisions. While these events have complex roots that go beyond opposition to energy tariff reforms, they indicate the level of visibility and sensitivity to the reform agenda.

6. FGDs reveal that public opposition to the reforms is rooted both in issues of sector governance and customers' economic vulnerability. First, the increase in energy tariffs is widely associated with sector mismanagement, rather than with the costs of energy generation and distribution. In the case of electricity, prior tariff increases have most often been perceived as resulting from disadvantageous contracts granted by the government for the generation of renewable energy (among others); these contracts are perceived as corrupt, creating excessive profits for some and higher expenses for all consumers. In the case of district heating, high and rising bills are most frequently attributed to a situation in which customers bear the cost for network losses, and to a lack of control over fraud and theft that raises the expense for all paying customers. Second, though equally as important, resentment toward tariff reforms reflects the real burden of energy costs on the budgets of low- and middle-income households and impacts their quality of life.

7. Households cope with increased electricity, gas, and district heating tariffs by reducing

spending on food and clothing. All groups of respondents note the need to cut costs on food and clothing to manage energy expenses. While middle-income groups report substituting lower-quality products for higher-quality ones, low-income households see a direct impact on the quantity of food they can afford to buy, which affects their nutrition and health. Among the low-income sample of respondents, four out of every five report buying less food; 40 percent of middle-income respondents mention reducing the amount of food purchased in the household, yet the majority of them note having to opt for cheaper foods. Among the poor, urban households are more affected by food deprivation because they are less likely to preserve and store food for the winter (this strategy is mentioned 3.5 times less frequently by urban respondents). For example, respondents from an urban household ethnographic interview note that they skip medical exams in the winter; pensioners in the household refrain from getting dental exams and buying medicine in order to have more cash available to feed younger family members. Respondents from a household in a small town, with two working adults and a teenager, reported that they routinely have to buy low-quality food with suspicious ingredients, and consider this restriction to be the most harmful they endure. Electricity and heating are vital to households, hence spending on them is prioritized at the expense of other basic needs.

8. Reducing the amount of energy consumed is another common strategy for managing energy expenses. Households report heating fewer rooms; heating rooms only when multiple household members are home; reducing appliance usage; and installing energy-saving bulbs. Even though these strategies particularly impact the quality of life of the poorest people

(as they are more likely to employ them), their cumulative impact in terms of savings is perceived to be lower for low-income groups than for middle-income ones that can invest in more advanced energy-efficiency measures such as home insulation. Poorer groups' greatest obstacles to investing in energy-efficiency measures include their high-cost/low-priority nature, compared to other pending needs; their high up-front cost and/or the need to take commercial credit to finance building-level insulation; difficulties organizing building-level insulation with other residents; and, to some extent, distrusting contractors. Together, these obstacles make such investments appear risky in terms of generating future savings.³⁷

9. Switching to lower-cost energy sources is one way households have coped with rising costs over time. Households tend to switch from electricity, coal, or gas to wood, which is a significantly cheaper heating source.³⁸ However, wood is problematic in that it generates indoor smoke, requires labor or incurs a cost for transportation and chopping, and requires additional investments in the dwelling, such as repainting walls each year. It is also not an option for many apartment residents who live in buildings without chimney pipes. Some district heating users have tried to switch, fully or partially, to electricity or gas, but with prices rising, they do not expect this to generate long-term savings. It is notable that low-income households that report switching to cheaper

sources did so a decade ago or even earlier, whereas middle-income households have been more likely to consider new sources more recently. Overall, switching to cheaper sources is not an easy option—most respondents in the sample, for whom switching to wood was technically an option, have done so already. Apartment residents connected to district heating do not currently have viable alternatives.

10. Being able to afford energy is also important for households' ability to carry out essential livelihood activities, many of which are related to electricity use. Electricity comprises an equal or higher share of reported energy expenses even for households that do not use it as a main heating source (see Figures 1 and 2). In fact, rural households, which heat their homes mostly with wood, report higher overall expenses on electricity throughout the year compared to urban households. For many residents of rural areas and small towns, electricity is tightly linked to subsistence food production (water pumps for irrigating small plots of land and freezers to store food for the winter). In addition, these households also often use old and inefficient appliances that consume a lot of electricity. Rural respondents are much less likely to report energy-efficiency improvements or to purchase new appliances than urban ones. Among rural and small-town respondents, electricity is also sometimes used as a complementary heating source and is the prevalent source of energy for heating water via electric boilers. This makes them more susceptible to high expenditure burdens from rising electricity tariffs than urban district heating users.³⁹

11. While it is rare for households not to pay energy bills, payment delays are common.

37 These findings are aligned with prior qualitative assessments on pro-poor energy-efficiency programming in Bulgaria (in 2011) and Poland (in 2011, 2013).

38 Within the FGD sample, the reported annual cost for heating with wood was in the range of 150–300 BGN, with district heating 290–540 BGN, with electricity 420–580 BGN, and for the group heating with gas, 370 BGN.

39 To be confirmed with survey data.

FIGURE 14. ANNUAL EXPENSES BY DISTRICT HEATING USERS

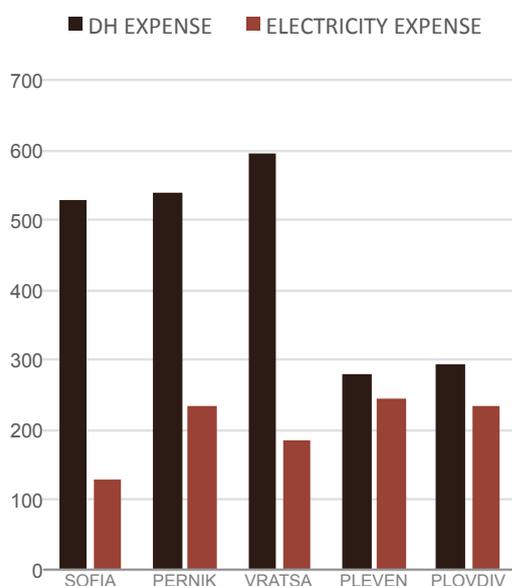
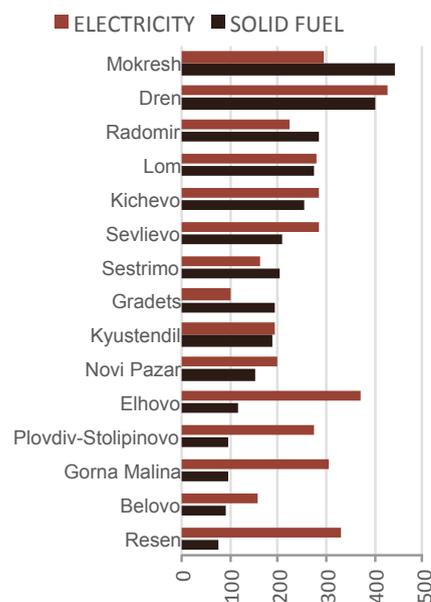


FIGURE 15. ANNUAL EXPENSES BY SOLID FUEL USERS



Source figures 14 and 15: Focus group discussions, average reported values in BGN.

Electricity and gas payments are prioritized or delayed only in the short term (1–2 months) to avoid disconnection. For district heating, where households cannot be disconnected, payment delays are more widespread. In fact, delaying is an established practice for low-income households, whose combined electricity and district heating bills for a winter month can reach 100 percent or more of the family’s monthly income. Low-income households commonly pay off their winter bills only in the spring or summer, including penalty fees. Even so, many customers prefer this system to one in which they sign a contract agreeing to pay a specific amount each month reflecting their average monthly consumption. Respondents offered various reasons for this, most often citing a reluctance to commit to a certain bill every month or out of fear that the amount agreed would not accurately reflect their consumption. In order to avoid long-term payment delays

and nonpayment, the Sofia district heating supplier has made efforts to proactively collect payments, such as starting a “loyal customer” program that offers financial incentives to pay bills on time, and a calling center that can help customers arrange a payment installment plan. Court cases have been initiated against long-term nonpayers; according to a Sofia heating company representative, over 20 million BGN were retrieved via court decision in 2013 alone.

13. Perceptions vary widely regarding the HB’s effectiveness; the perceived effectiveness is influenced by the type of energy source used, as well as by regional and seasonal variations in heating expenses. Overall, rural groups and beneficiaries that use wood for heating find the benefit to be most useful. In their case, the benefit may cover the majority of wood expenses for the heating season. On the other hand, district heating users—especially in regions

where district heating tariffs are higher, such as Vratsa—find the HB of limited use; it covers a third or less of their district heating cost. A social assistance representative in a small town reported that the benefit should be enough to cover the expense of heating one room through the winter, and that recipients often choose to heat the kitchen or the smallest room in the house to live in during that time. A social worker in a remote rural village, on the other hand, reported that the HB is only enough to cover about one tenth of required heating expenses. She saw this as a function of the long heating season in their location, and evidence of the fact that the benefit amount has not grown proportionately to the price of firewood in their area. In sum, there is no clear understanding or consensus by either HB recipients or administrators on what the desired effectiveness of the benefit should be in terms of covering energy costs, and its effectiveness in covering heating expenses is found to vary widely among households in the sample.

14. Despite challenges in coverage, restricted access, and varying degrees of effectiveness, the HB program is well targeted and considered an essential support mechanism for those who currently receive it. Among the FGD sample, groups of HB recipients and Roma were found to be the most vulnerable, reporting the starkest deprivation in terms of energy use and the highest relative energy expenditure. Concerns expressed about HB program fraud do not relate to wealthier groups undeservedly taking advantage of the benefit; rather, to vulnerable households being excluded from receiving the benefit. Such concerns mostly consist of complaints about certain peoples' connections to social workers that allow them to prepare their application better and thus avoid rejection, or about families who sell vouchers for wood on

the black market rather than using them for fuel. In general, distrust of institutions drives poor households to prefer cash over social tariffs or voucher support. Households that receive the benefit consider it an essential source of support regardless of the share of expenses it covers.

15. Still, all groups underscore that the HB should not be the government's main mitigation measure for rising energy tariffs. A segment of respondents—mostly middle-income and low-income groups of men who are excluded from this benefit—see themselves on the losing side of such government support, as taxpayers and contributors to its budget and also because they are strongly affected by the reforms. They would rather see solutions take the form of a control on the rise of tariffs and an increase in jobs and incomes.

16. Sentiments against social assistance programs also often invoke ethnic hostilities, particularly against the Roma, who are widely perceived as their main beneficiaries. The few opinions that were voiced about fraud and forgery of HB-related documents were also mostly directed against the Roma. By contrast, ethnic minority groups are more likely to report that they face discrimination in accessing social assistance. Minority groups complained against the eligibility criteria that requires HB beneficiaries to be registered for 6–9 months with an employment office in order to access the benefit. Members of minority groups stated that they rely on informal and seasonal work so they are usually not unemployed for long periods, yet their overall income is very low. This criteria, they say, discriminates against them. It is worth noting that this requirement is also opposed by non-Roma who rely on informal or seasonal work; for example, residents of a village

in the sample whose main livelihood is seasonal construction work.

17. Overall, respondents think that tariff changes should be proportionate to changes in income.

Participants from all categories in the sample relate their difficulties with managing energy bills to the fact that the levels of salaries, pensions, and incomes as a whole have stagnated over the years. In this regard, participants cite the ratio between average incomes and energy prices in other European countries, and believe they bear a higher burden than other EU citizens, relative to their incomes. They blame the government for failing to raise salaries and pensions as per the rising cost of living.

18. Consumers also oppose energy reforms because they do not trust energy sector institutions and because they believe there is nothing a consumer can do to address grievances against these institutions.

Communication between consumers and providers of electricity and district heating is difficult because these institutions have highly bureaucratic procedures. Respondents say that these institutions follow unclear rules that are to the customers' disadvantage. This is illustrated by one low-income woman from Sofia, a district heating user, who stated, "To fight against such an institution, one must have a lawyer and must have money to pay somebody to defend your interest." Even routine concerns about inconsistent bills or unclear charges take time and money to resolve. Respondents invoked multiple examples of billing and service mistakes, which customers have had to proactively pursue at their personal cost and time, and with uncertain outcomes. Interviews with providers show that the institutions lack capacity and systematic approaches to handling such cases.

For example, district heating companies answer only grievances and inquiries that they believe are relevant; ones considered irrelevant by the company go unanswered. Consumers are routinely concerned by their inability to either understand their bill or compare it to their actual level of consumption. In fact, many electricity customers never see their bills—they are either told what they owe by the local payment center, or the amount is directly withdrawn from their accounts (if they have chosen online payments). For district heating, customers see their bills in terms of the amount they owe, but are unable to access information on how much they consumed (these bills are prognostic and based on consumption from the previous year). District heating respondents from the capital are convinced that bills are manipulated by the heating company.

19. Part of the reason for the lack of trust in providers is the absence of real alternatives for consumers.

There are three electricity providers in the country, but consumers do not have the option to switch between them, as they each serve a specific geographic area. There is no real alternative to district heating, either. Households that choose to disconnect heating radiators still face relatively high basic service fees and the additional costs of alternative heating, which makes switching expensive. A minority of households have installed independent gas heating systems and disconnected themselves from district heating. These consumers are uncertain of the long-term value of their investment, given the high up-front costs and the fact that gas prices are also rising. As a result, citizens largely feel "unprotected" in the face of rising tariffs, with no other choice but to accept higher bills and continue to reduce basic consumption to be able to pay them.

20. Study participants shared the view that electricity and district heating tariff increases are driven by political or private interests. In the electricity sector, government contracts with suppliers—perceived as corrupt and disadvantageous to end users—are often seen as a cause for tariff hikes. Residents commonly refer to the unfairness of electricity exports to Turkey at lower prices than those that prevail on the domestic market. Green energy investments and the “green energy” tax applied to electricity is also a source of contention—citizens associate this tax with quick profits made by few investors at the expense of all citizens. Higher costs for district heating are associated with theft and losses in the system.

21. Opinions on hopes and priorities for general improvements to the sector differ across respondents, but all support the idea of greater control and predictability of tariffs. Some believe that energy institutions should be state run, blaming tariff increases on nontransparent privatization and energy companies’ profit-seeking behavior; others, by contrast, blame bad governance on state monopoly over the sector and believe more competition should be allowed. Even though individual respondents express different views on what the role of the state should be, it is notable that all views show frustration with uncontrolled and nontransparent tariff increases and reflect a common desire for greater predictability, transparency, and systems of control in the sector’s management.

22. Media—newspapers and TV—are a main source of information on sector reforms, although respondents also claim a high degree of mistrust toward “official statements” made in the media. In the discussion on overall attitudes toward energy sector policies, respondents frequently

referred to recent media stories, such as on the Kozloduy nuclear power plant, the Belene project, and the South Stream gas project.⁴⁰ These projects receive wide media coverage as they relate to the country’s energy sovereignty and external relations. However, when it comes to communication on tariff increases, respondents believe that information is limited and less transparent, and that official statements are geared toward preparing the public for upcoming tariff hikes and not toward informing them about the state of the sector and causes for reform. At the same time, stories that come from “anonymous” government sources that reveal corruption schemes are trusted widely.

Section II: Policy Implications and Conclusions

23. The qualitative assessment leads to the following conclusions:

- Policy actions need to focus on both: (i) effective mitigation of adverse impacts on household well-being and poverty impacts; and (ii) governance and accountability concerns. Failing to proactively address either of these sets of constraints is likely to compromise the overall social sustainability of the reforms.
- The HB program can be an effective measure of mitigating poverty impacts; however its coverage of poor households needs to be

⁴⁰ The Kozloduy and Belene projects refer to bids that the Bulgarian government has opened to international investors for developing domestic nuclear energy. In 2013 the government summoned a referendum on whether the Belene nuclear power plant should be built; the referendum was deemed as “failed” due to very low turnout. The South Stream project (led by Russia’s Gazprom company) refers to a gas pipeline from Russia to Central Europe, which crosses through Bulgarian territory. The Bulgarian government initially agreed to the project, but work was later halted due to reported noncompliance with EU law.

significantly expanded, and access for eligible households must be more actively facilitated.

- Where possible, regional and seasonal variations in household energy expenditures should be reflected in the HB to ensure that social assistance can effectively alleviate the energy expense burden for all its recipients.
- In addition to addressing the cost of district heating and gas, mitigation measures should also alleviate adverse impacts of higher electricity prices, especially on rural and small-town residents. Electricity consumption is essential for subsistence food production and other rural livelihood activities, and also for meeting basic needs such as heating water. Efforts in this regard may also include encouraging the use of more energy-efficient appliances.
- Pro-poor energy-efficiency investments can help decrease the vulnerability of both urban and rural residents to rising energy tariffs. Currently, efforts to reduce energy consumption are widespread; they affect consumers' ability to adequately heat their homes without offering significant savings. Reducing energy consumption by the poor (such as by heating less space) is harmful to their health and less cost effective than the more advanced investments that middle-income households make.
- Measures to support energy affordability through tariff reforms need to be sensitive to the distinct needs of Roma populations. These include (i) Roma dwellings are often in much worse condition and in need of more basic repair than standard energy-efficiency investments; (ii) Roma are much more likely

to be employed in the informal economy, which impedes their ability to receive social assistance; and (iii) government policies to compensate energy tariff increases with social assistance may escalate hostility against Roma, who are perceived by non-Roma as being the primary beneficiaries of social assistance.

- Social accountability interventions need to be integrated in both electricity and gas and district heating services to improve trust and ability of consumers to seek their rights vis-à-vis providers. Such interventions should include, among others, strong grievance redress mechanisms.
- Clear and transparent bills will help increase consumers' trust in providers. At a minimum, all consumers should be able to see their bill and the amount of energy consumption on which it is based.
- Communication efforts by the government, the media, and energy sector institutions (regulators, utilities) also need to focus on the efforts for improving governance, transparency, and control in the electricity, district heating, and gas sectors. Such efforts also need to be more firmly based on quality analysis of the sector; better present the arguments for tariff and subsidy reforms; and highlight good practices from other EU member states in this area. Media statements that are limited to official announcements on impending tariff increases are unlikely to fundamentally improve understanding and acceptance of the reforms.
- More generally, the government also needs to focus on increasing the transparency and

accountability of efforts to reform the energy sector. Publishing contracts awarded in the sector and involving third-party monitors could help increase public confidence in the energy sector and in the government's reform efforts.

Section III: Ethnographic Interviews

SOFIA CITY, URBAN AREA, APARTMENT IN A CONCRETE BUILDING

This family lives in a 94-square-meter apartment in a 30-year-old building, where they have three rooms and a kitchen. The household consists of four people—three adults and one teenager. Two of the adults are retired (78 and 68 years old). They live with one of their two daughters (an employed systems administrator, 44 years old) and with her daughter (a 17-year-old high school student). During the day they frequently take care of their other daughter's baby, who lives in a separate household.

The household's income consists of two pensions and a salary. They also earn some additional income by making traditional spring souvenirs, and by selling houseplants they grow themselves. The average monthly income per capita is 320 BGN.

Spending on energy sources

The household is connected to the district heating network, which provides heat and hot water. In the winter, district heating bills are about 200 BGN/month. The highest bill of the last heating season was in January 2013 for 235 BGN; the lowest one was in April for 80 BGN. The family also received a reconciliation bill for 275 BGN at the end of the season, thus adding 46 BGN to their average monthly bill during the heating season. The amount seemed to them unusually high. The average annual district heating expenditure amounts to 1,440 BGN, or 9 percent of their income; however these expenses are concentrated in half of the year. Electricity bills are on average 30–32 BGN/month year-round; they may range from 25 to 38 BGN throughout the year.

Coping strategies

To cope with energy expenses, the family cuts spending on food, clothing, entertainment, books, and medical expenses. The two pensioners have passed up needed dental work and skipped buying medicines. Until recently the pensioners worked a plot of land to produce fruit and vegetables. Now they try to sell plants and souvenirs at the market, and use



that money to buy some produce to preserve for the winter. The family needs to save money in the summer to pay the winter's heating bills. In the past they have had to restructure their debt with the district heating provider to repay all heating bills. They are not aware of social assistance benefits for heating.

BOTEVGRAD, URBAN AREA, APARTMENT IN A BRICK BUILDING

The apartment is a 33-year-old 42-square-meter studio that consists of one room and a kitchen. The family, which consists of two working adults and one teenager, has lived there for two years. The wife, who is 42 years old, works as a line operator at an automobile electronics plant; her husband, 54, works as line manager at the same enterprise. The family's monthly income is 1,200 BGN. The wife's parents live in the same building and often watch the 14-year-old child during the day. The family also sometimes dines at the grandparents' place, thus avoiding cooking every day.

Spending on energy spirces

The household uses electricity for all household needs—heating, cooking, and powering appliances. The home appliances include a refrigerator, a washing machine, an electric

stove, a microwave oven, a water boiler, an electrical radiator, an air conditioner, an electric blanket, two television sets, and a computer.

During the heating season bills range between 100 and 150 BGN/month. The heating bill is lower in November (about 100 BGN), and highest in December and January (over 160 BGN). Off-season bills are approximately 40 BGN/month. If they leave the house, for example, to go on vacation for 10 days, their monthly bill may go down to 30 BGN. Their annual electricity expenses are about 1,000 BGN or 7 percent of their income.

Coping strategies

To cope with energy expenses, the family cuts spending on entertainment and social gatherings such as going to movies, restaurants, or meeting friends outside of the home. They do not buy new clothes unless essential, and do not purchase high-quality foods. They use electricity sparingly; they rarely turn on the air conditioner and do not heat the house when no one is home. The child spends time with grandparents during the day, which saves heating and cooking expenses. The couple has installed new windows and doors to better insulate the home, and purchased an air conditioning unit for heating and cooling, which



they believe uses less energy than their older radiator. The family is not aware of any social assistance programs.

VILLAGE OF SKRAVENA, RURAL AREA, TWO-STORY HOUSE

This house was built in 1952 and the family has lived there since 1967. The area of the house is about 80–90 square meters and consists of a dining room, kitchen, and bathroom on the first floor and a living room and two bedrooms on the second floor. The couple, both 68 years old, are both retired and live there alone. Their monthly income consists of their pensions and is 240 BGN/month each.

Spending on energy sources

Their only energy source for heating is wood. In December, January, and February they use 2 cubic meters of wood per month, at 60 BGN/cubic meter, or a total of 120 BGN per month. During the other months of the heating season, they use 1–1.5 cubic meters of wood, which amounts to 60–90 BGN per month. Some years they start heating earlier in September, and/or (depending on the weather) continue heating until April. Annually they spend about 600 BGN on wood or 10–11 percent of their income.

For heating they use an old wood stove that the husband made himself by transforming an old electrical stove into a wood stove. The stove heats water for the radiators and the water boiler. They have one radiator on the ground floor and three radiators in the bedrooms upstairs. When the stove is working it also heats water for household use. In the summer months they use electricity (an electric boiler) to heat water.

The family's electricity bills vary between 50 BGN/month in the winter and 60 BGN/month in the summer. Annually electricity bills amount to about 660 BGN or 11–12 percent of their income.

Coping strategies

To cope with energy expenses the household reduces heating; when the weather is mild, they do not heat the house during the day, only at night. They have invested in an energy-saving electric water boiler. They buy lower-quality foods and take advantage of sales and promotions, and also produce food themselves (fruit, vegetables, poultry, and eggs). Sometimes they need to purchase food on credit at their local store until they receive their pension. The household does not receive a heating allowance as they are aware they exceed the income threshold.



1. This report presents findings from a qualitative assessment on social impacts of and attitudes toward energy tariff reforms conducted in May 2014. Qualitative research was carried out as a part of programmatic economic sector work (ESW) on energy affordability in the EU–11,⁴² which employs a multisectoral approach to addressing energy affordability issues in Croatia, Bulgaria, and Romania. In six regions of Croatia, 22 FGDs⁴³ were conducted with low- and middle-income households⁴⁴ that use diverse energy sources. All FGs were segregated by gender. Six key informant interviews were conducted with representatives of energy companies, social assistance workers, and civil society representatives. Additionally, three ethnographic interviews were conducted with households. The qualitative research findings reflect the opinions and perception of respondents.

2. The main findings are as follows: Croatian households have accepted tariff increases as part of EU accession without major opposition. However, most respondents are struggling with bill payments. The majority must make cuts in food purchases to cope.

41 This summary note was prepared by Ezgi Canpolat. Data collection and initial analysis was carried out by GfK Croatia and supervised by Sophia Georgieva. This note is part of a series of qualitative assessments carried out for the energy sector by the Europe and Central Asia Social Development Unit in FY14 and is also part of the programmatic ESW on Energy Affordability in the EU–11 countries. Caterina Ruggeri Laderchi and Nistha Sinha co-led this work.

42 EU-11 is here used to refer to Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia.

43 Two FGDs were pilots and they were not included in the findings.

44 “Low-income” respondents were recruited to represent roughly the poorest 40 percent; “middle-income” respondents were recruited to represent roughly the third income quintile.

- Poor district heating users are especially vulnerable as they are unable to control heating consumption and cannot switch to an alternative energy source. These households cannot afford the up-front cost of installing individual meters that would calculate their bills based on usage instead of apartment size. Some cities outside of Zagreb have even higher district heating rates.
- As for existing social assistance programs that can help households afford energy, respondents do not perceive these as an adequate source of support because:
 - the system is decentralized and there is no guarantee that their local government can afford to provide assistance to households that are eligible;
 - vulnerable households, especially rural ones, have little information about existing social assistance programs;
 - social assistance is prone to fraud, especially given the widespread practice of informal/undeclared incomes, which leaks the distribution of the benefit to ineligible households;
 - Roma in some locations feel that social assistance institutions discriminate against them; and
 - allowance for wood is distributed in November, when wood prices are the highest.
- Households highly rank the option of energy-efficiency support as a way to help reduce energy costs. The most common

method for saving energy is to use the cheaper night tariff for electricity.

- Even though most households have accepted and are resigned to high energy prices, there is a lack of understanding about the justification for increasing energy tariffs. In Croatia, unlike in Bulgaria and Romania, there is a strong belief that increased use of renewable energy will help lower costs for residential users.
- Consumers interact with energy providers frequently, mostly in relation to clarifying bills.

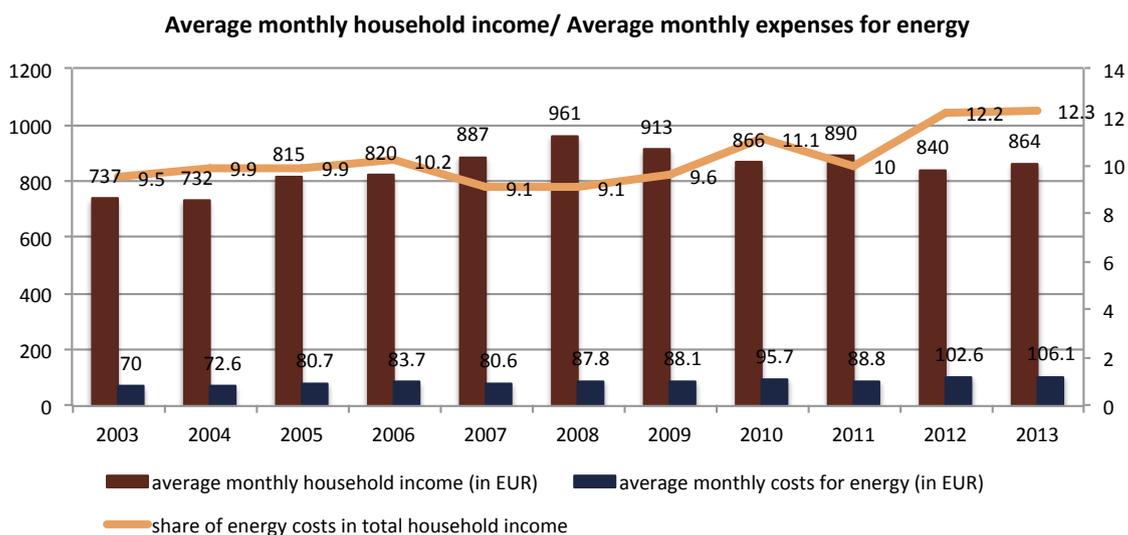
Section I: Croatia Country Context

3. In Croatia, the liberalization of energy markets started in 2002 and was completed in 2012 as part of Croatia's EU accession process. The government of Croatia adopted the EU's Third Energy Package in 2012 prior to joining the EU, and, as a direct consequence, liberalized

energy prices. Since 2012, energy firms have determined prices with the approval of the Croatian Energy Regulatory Agency (HERA). In May 2012, the cost of electricity increased by 21 percent after four years of consistent tariffs. Between 2000 and 2012, natural gas prices increased by more than 150 percent. Despite such increases, Croatia still has the third-lowest natural gas prices in the EU, after Hungary and Romania. District heating tariffs also increased in 2012 after five years of stability.

4. Electricity and natural gas are the two most widely used energy sources in the country. HEP Group (Hrvatska Elektroprivreda), Croatia's oldest national electricity company, produces the most electricity in Croatia. In 2008, two new electricity companies began providing service to the Croatian market: a German company called RWE AG and an international supplier called GEN-I Zagreb. Since the emergence of new suppliers on the market, households can choose their electricity provider. In 2012, a total of 49 companies held a gas supply license and

FIGURE 16. ENERGY EXPENSES BY INCOME



Source: GfK Croatia, 2013, "Incomes and costs."

36 companies held a license for gas distribution. In Croatia, only 11 percent of households are connected to district heating systems; 13 companies provide district heating in 18 towns. There are clear regional differences in the type of energy sources used across the country: the piped gas and district heating networks are present mostly in the northern and eastern parts of the country, whereas households in southern Croatia rely almost exclusively on electricity.

5. Energy affordability and rising tariffs remain a concern in Croatia. After the global financial crisis of 2008, Croatia experienced a significant economic downturn. Household incomes have been declining since the crisis, while energy prices and household monthly energy expenditures have been increasing. The share of energy expenditures in household budgets increased from 9.5 percent in 2003 to 12.3 percent in 2013.

6. In recent years, the use of renewable energy sources increased in Croatia, while the consumption of most energy sources declined. In 2012, the consumption of electricity decreased by 1.8 percent and natural gas and district heating decreased by 6.1 percent. The consumption of fuel wood

and biomass increased by 8.6 percent and the consumption of other renewables increased by 102.1 percent.

7. Social assistance in Croatia is administered at local and state levels. It is poorly targeted due to a lack of coordination between central and local agencies.

The central government is responsible for granting guaranteed minimal support (GMS) to vulnerable households. Local governments are responsible for providing assistance for living costs, which encompasses energy costs, and fuel wood costs. Living assistance and fuel wood assistance are provided in cash. There are few or no enforcement mechanisms to ensure that local governments fulfill their legal responsibility to provide assistance. Even though GMS recipients are entitled to such assistance, in many cases, local governments lack sufficient funds to provide the assistance to all who are eligible.

Section II: Findings

ENERGY USE AND SPENDING PATTERNS

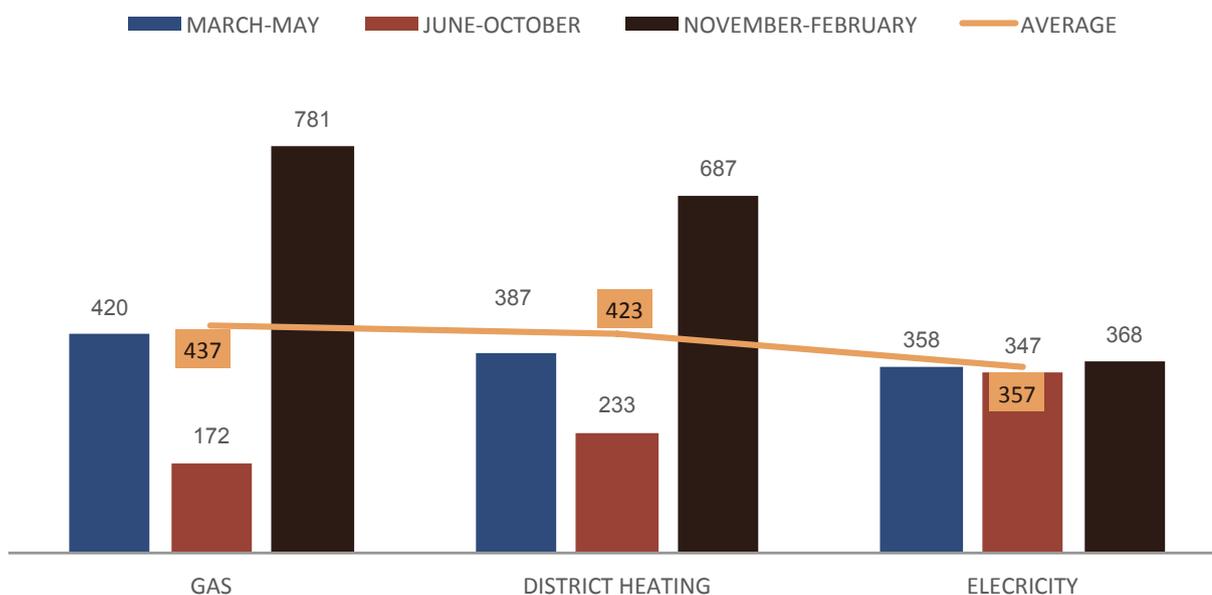
8. Croatian households use electricity, natural gas, portable gas, district heating, and wood. The type of energy used by a household depends on its income level and location. The majority of low-income FGD participants in rural areas report using wood for heating because it is the cheapest energy source. Middle-income families in rural areas state that they use electricity for heating.⁴⁵ Access to and use of district heating is highest in urban areas. Middle-income respondents in urban areas mostly use district heating. For cooking, FGD participants mostly use portable gas.



A wood stove in a Roma house in Zagreb.

⁴⁵ Only two FGDs were conducted with sixteen middle-income household members in rural areas.

FIGURE 17. AVERAGE ENERGY EXPENDITURE PER SEASON



Source: Focus group discussions, 2014.

9. The majority of FGD participants purchase wood from suppliers. Only a small number of respondents collect wood from their own properties. Social assistance recipients use assistance to buy wood. When they run out of money, they acquire wood by helping the foresters in exchange for wood scraps. The Roma population uses assistance to buy wood; they also collect wood pallets from warehouses and utilize old furniture people throw away.

10. Most energy expenses fluctuate with the seasons, with more energy used and higher expenses incurred during the winter months. Consumption of natural gas, district heating, and wood is highest during the heating season. Electricity consumption is generally the same throughout the year, with the exception of middle-income households in rural areas. These households use electricity for heating and report paying higher electricity bills during the heating season.

11. Women and men appear to have different patterns of energy use and different approaches to saving energy. The majority of female and male respondents agree that women, especially those who stay at home, are households' main consumers of energy and are better positioned to save energy, as they perform most of the household chores (with the exception of heating-related tasks). According to female respondents, women are more concerned about saving energy compared to men. In FGDs with households that use wood, female and male respondents both state that men are in charge of preparing, transporting, and cutting wood.

12. Respondents make paying energy bills a priority so as to avoid debt accumulation, disconnection, and high late payment and reconnection fees. Respondents state that they cut other expenses or borrow money from friends and relatives to afford their bills. Even

with these coping strategies, 35 percent of respondents—mostly low-income ones—say they do not manage to pay their bills regularly. Respondents with part-time jobs mention they are late with payments because they receive irregular salaries, or due to unemployment. District heating bills are some of the most difficult to pay in a timely manner because these bills are large and concentrated in the winter months. Moreover, households are unable to control their consumption because bills are calculated by apartment size, rather than amount consumed.

COPING STRATEGIES

13. Households make a clear connection between the rise in energy prices and the need to make cuts in household spending. Ninety-eight percent of participants in FGDs report reducing spending on food to cope with increasing energy prices. Low-income households, including social assistance recipients, note that they reduce their number of hot meals in a day, stop eating fruit, eat lower quality products, and bake and eat more bread. The respondents acknowledge that these measures affect their nutrition and well-being. Some households also report buying food from neighboring countries such as Italy and Slovenia, where food costs less. Low-income and rural households substitute purchased food with homegrown and homemade food, and consume produce from their garden plots or eat the canned food they prepared in the summer. Another coping strategy is to cut spending on clothing; most respondents say they stopped buying clothes. They also gave up trips, vacations, and outings, all of which became luxury activities when energy prices increased. Respondents say they either sell their cars or only use them in an

emergency. Most respondents switch to riding bicycles.

14. Switching to lower-cost energy sources is one way households cope with high costs.

Households that previously used gas stoves have switched to wood for heating and cooking due to increasing gas prices. Many low-income households also report that they have stopped using electric water boilers, heating their water on wood stoves instead. District heating users express a desire to switch away from this source yet they are unable to disconnect from the central heating system.

15. Middle-income households apply coping mechanisms that have a marginal effect on their well-being.

Respondents state that to cope with rising energy prices they buy discounted groceries, reduce spending on cosmetics, and shop for clothing during sales. They also drive less and switch to riding bicycles. Respondents mention that they are likely to have social gatherings at their homes instead of meeting outdoors.

16. Using two-tariff meters⁴⁶ that calculate electricity consumption at different rates depending on the time of the day is another common strategy for managing energy expenses.

The two-tariff meter lets consumers use electricity at a lower rate after 10 p.m. in the summer and 9 p.m. in the winter. Respondents state that they must alter their lifestyles to take advantage of the cheaper tariff option; they use the washing machine, dishwasher, and oven during the night. One negative effect reported by

⁴⁶ Electricity companies use two-tariff meters to charge consumers two different tariffs at different times of the day. In Croatia, electricity companies let consumers use electricity at a cheaper rate from 10 p.m. to 8 a.m. during the summer and from 9 p.m. to 7 a.m. during the winter.

the respondents is that the noise generated by electric appliances disturbs any children in the household, as well as the neighbors.

17. Households also reduce the amount of energy they consume to cope with high costs.

To save on lighting, low-income households (including social assistance recipients) use wax candles and turn off the lights when they watch television. Low-income respondents say they stay out of their homes or stay with relatives, and also reduce bathing, showering, and ironing to avoid using energy. Other energy-saving tactics include heating fewer rooms and keeping radiator temperatures at a minimum. Forty percent of households report saving electricity by turning lights off and 36 percent of respondents use energy-saving bulbs. Female respondents said they reduce or quit ironing to save energy. Low-income female respondents mention doing laundry manually.

18. District heating users state that they do not have control over their bills and lack incentives to save energy.

District heating is billed based on the size of the apartment. According to EU regulations, residents should install individual heating meters, which would allow households to be billed based on the actual amount of heat they consume. Some households have installed such meters; however buying the meters requires an up-front cost. Using meters is also contingent upon agreement among all residents of an apartment building; in order to be billed based on consumption and not area of the dwelling, more than 80 percent of tenants in a building need to install splitters (meters). However, not every household in a building has the financial means to do so. In cases where less than 80 percent of a building's tenants have splitters, even the consumption

of tenants with splitters is calculated through the building's shared meter. Respondents in these cases state that their bills did not decrease after installing splitters. Even if a household discontinues use of district heating, and removes radiators from the apartment, they still receive a bill for DH shared costs in the building; this issue has spurred public dissatisfaction in some locations.

19. The majority of respondents believe that increasing the use of renewable energy sources will reduce energy costs for households; they therefore consider investments in renewable energy a top priority for the sector.

Respondents state that Croatia should increase its use of solar and wind power to produce energy and reduce electricity imports. They think solar panels should be installed on houses and be financed by the state. Respondents argue that renewable energy source use will benefit all citizens.

20. Most households believe it is important to use energy-efficiency measures such as home insulation and to install polyvinyl chloride (PVC) windows.

However, most respondents lack the financial resources to invest in these measures. Under the current system, households can get assistance for installing solar panels and façade insulation. More than half of all respondents do not have adequate information about these support systems. Respondents who are aware of the assistance for insulation complain that the assistance, which covers 40 percent of the total costs, is only given after the insulation is completed. This is problematic because low-income households lack the up-front money to invest in the insulation. Respondents also state that there is a lot of paperwork to be completed in order to get this assistance.

SOCIAL ASSISTANCE

21. Household awareness of available social assistance mechanisms and eligibility requirements depend on the type of assistance and the household's income level and location.

Low-income households are more familiar with the assistance for buying wood (about one-third have heard of such measures) and middle-income households are more familiar with the assistance for living costs that covers utility bills (more than half have heard of it). Rural households are less familiar with the two types of assistance compared to urban households. Even households that know about social assistance programs generally have limited information about the eligibility requirements.

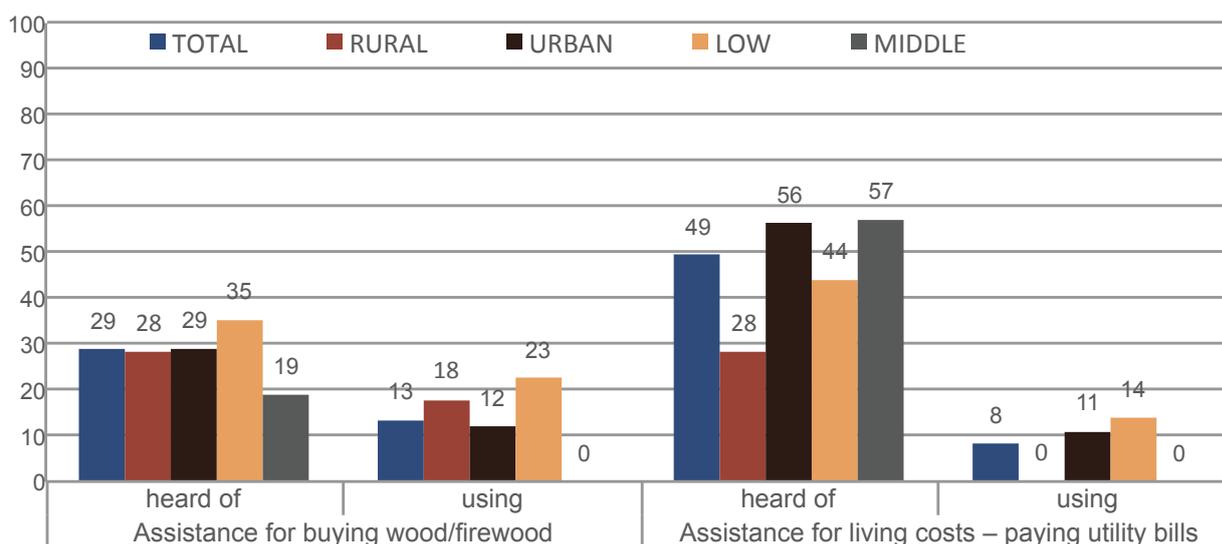
22. Respondents point to restrictive rules and a complex application process as key difficulties in accessing social assistance. The application process for social assistance is often perceived

as highly bureaucratic and complex. Eligibility criteria are perceived as too restrictive. Respondents also state that when applying for assistance they have to document income from the year preceding the application. They argue it is likely for someone who previously worked to be unemployed at the time of application, yet be disqualified under the existing requirements.

23. Respondents complain about the effectiveness and targeting of social assistance, as well as ethnic discrimination by social assistance institutions.

Recipients of fuel wood assistance report receiving cash in November, when wood prices are highest. The amount they receive has stagnated over the years even though the price of wood has risen. Respondents state that the process of verifying applicants' eligibility lacks oversight, which results in corruption. They report that undeclared incomes are common in Croatia,

FIGURE 18. AWARENESS AND USAGE OF SOCIAL ASSISTANCE



Source: Focus group discussions, 2014.

and some people only register a portion of their income and/or represent their wages as minimally as possible in order to be eligible for assistance. For example, some note that adult children of better-off families can receive assistance despite living in good conditions because they are unemployed and do not have property in their own name. Roma claim that they experience discrimination in the application process for social assistance. Roma are more likely to claim that they experience discrimination in the application process for social assistance.

24. When asked to choose whether they would prefer to receive social assistance in the form of either cash, voucher, or social tariff,⁴⁷ the most popular option (ranked first by 45 percent of respondents) is vouchers for façade insulation or PVC window installations. Respondents believe that vouchers have a clear purpose and cannot be misused, whereas cash might be spent on alcohol or cigarettes. The social tariff option is unpopular, as there are concerns it is vulnerable to fraud due to the problem of undeclared incomes. Social assistance recipients are more likely to prefer support with payment of utility bills or social tariffs.

RELATIONSHIP WITH ENERGY SECTOR PROVIDERS

25. Respondents do not trust new electricity providers and do not transfer their services to them. All respondents are aware of the new

electricity suppliers, and several mentioned that company representatives had visited them. Suspicion of new providers is mainly based on previous negative experiences with telecom operators, where respondents were offered better services but never received them. Rural respondents have limited information about new providers and do not know where to get more information.

26. Respondents often contact electricity and district heating providers about high and unclear bills. Electricity and district heating users mention that when they contact energy providers, they encounter rude officials who do not provide information related to billing. Respondents believe that new bill calculation methods are deliberately introduced to facilitate fraud. Social assistance recipients frequently contact electricity providers about paying debts in installments and are generally satisfied with the responses they get. Respondents who contact electricity providers regarding broken meters are mostly satisfied with their interactions. They state that electricity company officials promptly come and replace faulty meters. There were fewer interactions with the natural gas supplier. Respondents have contacted their gas supplier about rates, maintaining gas supply, and meter replacement. Respondents were generally satisfied with their interactions with gas company officials.

27. Respondents from all income groups are dissatisfied with the quality of gas. Households believe that gas is mixed with air; they suspect this because it takes longer for them to boil the water compared to when they use pure gas. They also report an unusual flame color and smell. Respondents state that if gas was pure, consumption would decrease.

⁴⁷ Respondents were given three options for how vulnerable households should receive assistance: (i) by providing money in addition to existing social assistance; (ii) by using a social tariff and charging low-income households lower energy prices; and (iii) by providing vouchers to cover insulation expenses. Respondents evaluated each option according to the appropriateness of the assistance for vulnerable households and to what extent it would help.

WHAT RESPONDENTS THINK OF POTENTIAL PRICE INCREASES:

"We would eat breakfast on Monday, lunch on Wednesday, and dinner on Friday"

LOW-INCOME
MALE DISTRICT HEATING USER, OSIJEK

"We would slice the bread thinner. Our children would be slender."

MIDDLE-INCOME
MALE NATURAL GAS USER, OSIJEK

"We would live in the dark."

LOW-INCOME FEMALE
ELECTRICITY USER, SPLIT

"We would bathe only on Saturdays, and in bowls like in old times. We would use rainwater or we would boil the snow."

SOCIAL ASSISTANCE RECIPIENT
FEMALE WOOD USER, OSIJEK

28. Households do not have adequate information about tariff increases and believe that private interests drive price increases.

Although respondents are aware of price increases, they do not know when and by how much energy. Residents associate price increases with corruption or bad sector governance. Respondents blame price increases on the high number of company employees and their exorbitant salaries, and also accuse the provider of raising electricity prices when it runs out of money. Respondents similarly think that providers raise district heating prices in order to pay their employees high salaries. The increase in gas prices is attributed to Russia, from where a significant portion of gas consumed domestically is imported.

29. Respondents have different attitudes toward tariff increases. Low-income households and recipients of social assistance are concerned

about further electricity price increases, while middle-income respondents indicate that they would be able to afford a 5–10 percent increase in electricity prices. Respondents from Zagreb, where district heating is the cheapest energy source, note that they would be able to afford a 5 percent price increase. However, district heating users in Slavonski Brod, Rijeka, and Varazdin—where district heating prices are higher—are especially vulnerable to price increases. Vulnerable respondents feel resigned toward tariff increases; despite complaining about price changes, most respondents feel helpless and believe they are unable to influence the reform process.

Section III: Policy Implications and Conclusions

30. The qualitative assessment leads to the following conclusions:

- Existing social assistance can be an effective measure of mitigating poverty impacts; however, there needs to be a central mechanism that guarantees social assistance to eligible households. National and local governments should develop a single list of eligible households for social assistance and secure a source of funds for providing assistance to these households.
- Poor district heating users should be provided assistance for up-front costs of individual meter installation, which will allow them to control their consumption of heat. In order to be effective, more than 80 percent of tenants in any one apartment building must have a meter.
- Energy-efficiency programs should be accessible to lower-income households. These programs can cover up-front costs for investing in energy-efficiency measures and can allow for gradual investments.
- The process of verifying applicants' eligibility for social assistance should have better oversight. Applicants who do not declare their income and/or have informal income should be identified and disqualified for assistance.
- The cash assistance for fuel wood should be provided when wood prices are cheapest.
- Utility bills should be presented in a clearer manner, reflecting consumption every month. In addition, better customer service of the utility company can increase satisfaction with the provider.
- Mechanisms for grievance redress should be provided to Roma populations, who feel that social assistance institutions discriminate against them.

Section IV: Ethnographic Interviews

ČAKOVEC, HOUSE

Four people live in the household: a husband and wife with two children who are 10 and 6 years old. Both spouses are currently unemployed. This year they received assistance for buying wood from the city of Čakovec, which was 900 kunas. They have lived in a 60 m² house for six years and had to take out a loan to buy it. They also receive 1,800 kunas per month. They spend most of this money on food and utility bills.

Spending on energy sources

They use wood for heating and electricity for lighting, cooking, and heating water. When they moved into the house, they used electricity for heating because they had not yet bought a wood stove. They pay electricity by paying



slips, which they receive every six months. After reconciliations they have to make additional payments. They are two months behind on their regular electricity payments. They arranged with the electricity provider to pay the additional sum in three installments, each of which is 200 kunas, but have not yet made the additional payments. They believe that the most electricity is consumed by the water heater and the cooking stove, which are turned on for at least two hours a day.

They do not buy wood. Instead, the husband goes to the forest almost every day to pick up wood scraps to use for heating. Their neighbor also delivers wood scraps to them and the husband helps the neighbor in return. They spend the assistance they receive to buy wood (900 kunas) on food because with the assistance they could buy only 3 m³ of wood, whereas they need 20 m³ in the winter.

Coping mechanisms

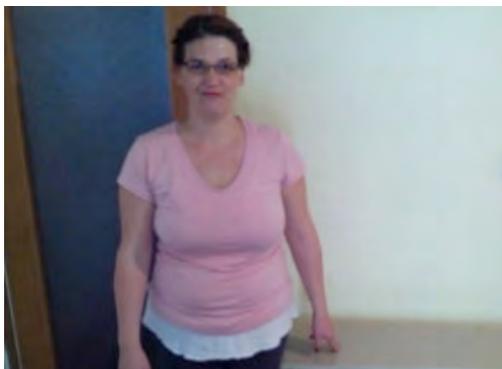
To pay their bills, they sometimes borrow money from their mothers. They also manually mow the lawn instead of using a lawn mower in order to save oil. Other coping mechanisms include keeping the clothes dryer in the bathroom to heat the bathroom, and using wood for cooking during the winter to save electricity. They installed PVC windows three years ago and now spend 10 m³ less wood than before.

Social assistance

They do not know much about the types of assistance that are available for paying utility bills. They like the idea of cash assistance, but say someone should keep track of how the money is spent. "Some people receive assistance and then go to bars. It is really inappropriate," they said. They believe that the social tariff is prone to manipulation; households that would pay lower rates under the social tariff would engage in wasteful usage habits, they say. They think the voucher for insulation is the best idea because households could save energy that way. People would automatically have lower electricity and heating bills.

Attitudes toward energy reforms

They do not know who sets the price of electricity, but believe the price is unrealistically high. The price of electricity should be adjusted according to the living standards of Croatian citizens. They were visited by the representatives of new electricity suppliers, but did not sign any contracts because the representatives were not persuasive. They state that if the price of electricity increases 5 percent they will try to pay the rates in installments like they have done so far, but they have no expenses left to cut. "We have nothing left to give up," they said.



SLAVONSKIBROD, TWO-STORY HOUSE

The respondent is 65 years old and is a retired locksmith. He lives with his wife, who is a housewife, and his son, who is 25. The respondent has been living in his current house for 34 years. Seventy percent of the family's income, which is 2,500 kunas per month, is spent on utility bills.

Spending on energy sources

The family uses natural gas for heating, heating water, and cooking. Seventeen years ago they used wood for heating, but started using gas when it was introduced to where they live. They think natural gas is easy to use and not harmful to human health.

Electricity rates are about the same throughout the year. After reconciliations they have to make additional payments. The respondent believes that the price of electricity increased twice in the past year and decreased once. He does not know how much the price increased or decreased.

Gas rates are highest during the winter months. They are lower in March, April, and in the fall—around 150 kunas. In the summer the family pays only 40 kunas for hot water. The gas meter is read every month and the respondent receives rates every month. The summer is an exception because they receive only one rate in September for the entire summer. The price of gas was 90 lipa per m³ 17 years ago, when they started using gas, and now it is over 3 kunas. They heat only 35 m² of their 52 m² living space.

Coping mechanisms

The family pays their utility bills first and splits up what remains according to their priorities. They save electricity by turning off the lights and use energy-saving bulbs. Before they leave the

apartment, they lower the radiators to 13 °C. The respondent has not gone to a cinema in 30 years; he does not buy new clothes or shoes. He does not travel and has not had a summer vacation in 15 years. He only spends money to eat and pay the utility bills. Several years ago they bought new appliances, which consume less electricity. He believes that one can save energy by buying more energy-efficient appliances.

Social assistance

The respondent is not familiar with available assistance mechanisms to vulnerable households. He knows about the assistance for buying wood and for paying utility bills, but is not aware of the conditions for receiving them. He thinks the best social assistance for vulnerable households would be to pay their utility bills for them. He believes that if vulnerable households are given cash they will spend it on cigarettes and alcohol.

Gender differences

He and his wife equally worry about saving energy. The bills are paid depending on who has the money. His wife checks to make sure the meter was read properly.

Attitudes toward energy reforms

The respondent heard that energy prices will continue to rise over the next few years. He thinks the high price is not justified and probably set by the country's officials. The respondent knows the new energy suppliers and he transferred to his service to a new supplier because his bills would be 7 percent lower. He sent the papers himself and filled the online application. He would be able to pay the higher price of electricity and gas up to a 10 percent increase. He says he has no other option but to pay. "We will keep paying and keep our mouths shut," he said. He does not know where else to

save since 70 percent of his income is spent on utilities.

SPLIT, APARTMENT

A husband and a wife with two children (one 8 years old and one 15 months old) live in the household. They have lived in this apartment for 8 ½ years. Both spouses have been unemployed for a year. The husband is registered with the unemployment office and they receive child support. Sometimes their parents help them and sometimes the husband works illegally in order to make some extra money.

Spending on energy sources

The wife uses electricity for everything in the apartment: heating, cooking, lighting, and heating water. They have always used electricity for heating. In the winter they receive higher bills because of heating. Their bills are now higher than before because of their second child (for example, they do more laundry). They spend 80 percent of their income on utilities. The respondent noticed that the price of electricity increased in the previous years, but she does not know by how much.

Coping mechanisms

They try to pay their electricity bills on time. When they have to pay larger amounts—more than 600

kunas—they try to make arrangements with the electricity provider to repay the total amount in installments. They try to pay electricity bills first and cut other costs. Once, they borrowed money to make additional payments. They use electric appliances after the cheap tariff is turned on. They use energy-saving bulbs and bathe their children together to spend less electricity on heating water. They charge the stove during the night when the cheap tariff is turned on, and then use the stove for heating during the day.

Social assistance

It was the wife's idea to apply for social assistance, and she researched the available types. She found the paperwork to be complicated. It took 15 days to gather all forms they needed. They are now waiting for the reply. The respondent believes that people who receive the assistance do not spend the entire amount on utility bills; they also spend it on food.

Gender differences

The wife takes care of paying bills, checking the meter, and maintains the household appliances, which are turned on overnight. The husband suggested purchasing energy-saving bulbs.

Attitude toward reform

The wife believes that the arrival of new suppliers



Photographs of Roma houses in Zagreb

should decrease the price of electricity. She heard from her acquaintances that there are no significant differences in price between old and new suppliers. She also heard that the transfer procedure from old to new supplier is complicated.

The respondent would mostly benefit from the lower price of electricity. HEP could turn on the cheap tariff a couple of hours earlier because during the night the appliances make noise, which disturbs their children and their neighbors. In the event of further price increases, the respondent would have to keep paying. "I do not know where else to save. I simply do not know what I would do," she said.

Romania⁴⁸

1. This report presents findings from a qualitative assessment of household vulnerability and attitudes toward energy tariff reforms that was conducted between November 2013 and March 2014.

2. The main findings are as follows:

- Respondents do not believe that tariff increases in gas, electricity, and district heating are justified given their income levels and the quality of service they receive. They believe that increasing tariffs are a result of monopolies, corruption, or bad governance in the sector, rather than the need for financial sustainability.
- Participants would rather have access to affordable, low-quality energy than to more

expensive, higher-quality services. They would not want to pay higher tariffs even if services improve.

- Households have coped with prior tariff increases by spending less on food and delaying energy payments at the risk of being disconnected. Respondents have not significantly reduced energy consumption as a result of the tariff increase because they believe they are using the minimum amount necessary. They expect that in the event of future increases, they will have to make even more drastic cuts to other basic needs.
- The overall attitude toward reforms is one of resignation. Consumers do not believe they can influence decision making in the sector.
- Support for energy efficiency is considered the best mechanism to help households manage the long-term impacts of rising tariffs. Heating benefits are also a well-known and valued source of support, but their coverage is more restricted; they are more likely to help households meet short-term expenses rather than help them save in the long run.
- District heating users describe disconnecting from the network and switching to lower-cost heating sources as a way to save and to have more control over energy consumption. However, this option entails an up-front cost that is often too high for the poorest people, and they even find their heating costs increasing as better-off neighbors disconnect from the district heating network.
- Priorities for improvements to the sector revolve around price, and mainly include

⁴⁸ This summary note was prepared by Sophia Georgieva. Data collection and initial analysis were carried out by Metro Media Transilvania. This note is part of a series of qualitative assessments carried out for the energy sector by the Europe and Central Asia Social Development Unit in FY14. The task was led by Michelle Rebosio. The note is also part of the ESW on Energy Affordability in EU-11 countries led by Caterina Ruggeri Laderchi and Nistha Sinha.

putting a cap on expected tariff increases. Respondents also call for more transparent billing and better capacity of providers to address customer service concerns.

Section I: Findings

3. This study is based on FGDs and key informant interviews. Twenty-six FGDs were held in eight regions of Romania, with low- and middle-income households⁴⁹ that use diverse energy sources. Additionally, 10 key informant interviews were conducted with social assistance, energy company, and civil society representatives, and four ethnographic interviews were conducted in households (see summaries in Annex I).

4. The qualitative research presented here was conducted as part of a three-country study on energy affordability in the EU-11, which also includes Bulgaria and Croatia. As new EU members, these three states are in the process of implementing energy reforms compliant with the third energy package of the EC (European Commission, n.d). These include raising electricity, gas, and district heating tariffs to cost recovery level, introducing competitive markets for electricity and gas, and investing further in renewable energy sources, among others.

5. The Romanian government has announced a schedule for increasing gas and electricity prices through 2018. Gas tariffs increased by 5–7 percent between 2010 and 2012 and by an additional 8 percent and 2 percent in July and October of 2013, respectively. According to the government's road map for the liberalization of the natural gas market, gas tariffs are

expected to grow gradually by 3–5 percent per trimester until the end of 2018. Average electricity prices for residential customers increased by 10 percent in July 2013 and are expected to grow at a similar rate between 2014 and 2018, rising every six months. Residential consumption of electricity would increasingly be purchased from the competitive market (10 percent in 2013, 30 percent by the end of 2014, and so on). District heating tariffs have grown at different rates across the country. Among the locations in the qualitative sample, some tariffs stayed the same between 2011 and 2013 (for example, Cluj, Timișoara, Deva); others increased moderately, by 13 percent (Craiova) or 36 percent (Bucharest); and others saw a more dramatic increase in the same period (for example, 61 percent in Medgidia, 126 percent in Reșița).

6. FGDs in Romania reveal that tariff increases have affected the household budgets of both low- and middle-income groups, and especially their consumption of basic goods such as food and clothing; in addition, they have not led to a substantial difference in energy consumption. Participants make a clear link between the rise in energy prices and the need to make cuts in household spending, but most of them prefer to avoid reducing energy consumption as a coping measure. The most commonly cut expenses are for food. All low-income respondents and over half of the middle-income ones state that they need to reduce spending on basic foodstuffs, whereas the remainder of middle-income respondents report that they only cut nonessential foods (sweets, drinks, and so on). Rural residents often substitute purchased foodstuffs with self-produced items, and are thus better able to save cash for fuel purchases in the summer and fall.

⁴⁹ Low-income households were recruited to represent the bottom 40 percent; middle-income households were recruited to represent the third wealth quintile.

7. Payment delays are the second most widespread coping strategy. Half of the low-income participants in the sample and about a fifth of the middle-income ones state that they have no choice but to delay energy payments during the heating season. Payment delays are more common among district heating users. Groups that consume electricity and gas do not use this strategy very often, as their services can be disconnected after two months of nonpayment. As a result, they face pressure to mobilize resources in a shorter amount of time. Additional coping strategies that are applied sporadically through the year include borrowing money from friends and relatives, borrowing with interest from credit unions, or purchasing food on credit. Other coping mechanisms were mentioned that have a less direct link to making energy payments, such as minimizing spending on clothing.

8. The cost of heating, and changes experienced in the past three years, vary widely according to where and what energy sources are used. Overall, the cost of heating is highest for groups that use district heating and lowest for groups that heat with wood. As mentioned above, among district heating users, some locations in the sample (Cluj-Napoca, Timișoara, Deva) did not witness a substantial (or any) change in prices between 2011 and 2013; whereas others (Reșița, Medgidia) have experienced a drastic increase. In Reșița, where prices have risen more starkly, approximately 58 percent of district heating subscribers have disconnected themselves.

9. In all of the sample settlements, respondents describe giving up or wanting to give up district heating services. On the national level, disconnections occurred at a rate of approximately 4 percent per year between

2010 and 2012, and 2 percent in 2013.⁵⁰ The advantages of disconnection include switching to a cheaper source of heating (as district heating is currently costlier than heating with gas), and being better able to control consumption in the future. For poorer residents, the up-front cost of disconnecting from district heating and installing an independent gas heating system is high, but they often feel pressed to switch when other neighbors in the building do, as the cost for the remaining subscribers becomes gradually higher.

10. Households that heat with wood take measures to buy it in bulk during the late summer, when prices are cheaper; those that purchase small quantities of wood every month are generally more vulnerable and face higher overall costs. Purchasing patterns for wood vary depending on the household's amount of available money and its storage capacity. Rural households in the sample were more likely to purchase all the wood needed for a winter at once, in August–September. Many of these households reported relying on self-produced foods through the summer to save cash for wood. Urban households that use wood were more likely to purchase it twice per year or in smaller amounts every month, either because they have fewer savings at the end of the season or less space for storage. Households that buy in smaller quantities throughout the year fail to take advantage of the best price (the cost of wood can rise by up to 50 percent from summer to winter). Roma groups in the sample were more likely to spread out wood purchases and buy small quantities every month; they were

50 Calculations made by Metro Media Transilvania based on data provided by the National Regulatory Authority for Local Public Services (NRALPS)—State of Energy Services, Romanian National Regulatory Authority. Cited in Metro Media Transilvania (2014).

also more likely to report collecting wood from forests and construction sites.

11. Energy affordability is perceived as problematic even under current tariffs, and is related to availability of stable income. Low-income groups report that spending on energy bills comprises about a third of their income in the nonheating season, and half in the heating season. About a quarter of the low-income respondents state that winter energy bills are actually higher than the amount they receive from stable sources of income. Middle-income groups report that they spend about one-third of their income on energy in the heating season and a fifth during other times of year. However, respondents tend to take into consideration only their stable income sources (salary, pension), and do not take into account homemade or homegrown food, seasonal jobs, or other occasional income, and the reported share of spending is therefore likely to be exaggerated. Still, these findings indicate that a household's ability to afford energy depends on its ability to obtain income from less stable sources. This creates an overall perception of insecurity among respondents regarding their ability to face the increasing cost of energy.

12. The HB program is a widely known and valued source of support for those who receive it; yet respondents think that many vulnerable groups cannot access it. HB recipients believe that the program is fairly easy to access. The majority of non-recipients—from both low- and middle-income groups—have not applied for the benefit, either due to lack of information about eligibility criteria or because they know they are not eligible. Lack of information is mostly cited as a problem in rural areas, and participants tend to blame their local municipality for not better

informing vulnerable groups about the program. Respondents state that two of the eligibility criteria—not being indebted to local authorities and not owning land—make it difficult for certain vulnerable individuals to access the program. Respondents believe it is particularly unfair that vulnerable households that have accumulated debt with the municipalities are ineligible for this benefit, since they have accumulated this debt because of poverty. Roma were more likely than non-Roma to cite insufficient awareness of the benefit or not knowing about the benefit in time to apply. They were also more likely to state that they were rejected for the program because of unpaid taxes to local authorities.

13. The HB's effectiveness also varies by source of energy used; it is reported as most effective for households that use district heating and gas, and least effective for households that heat with wood. For district heating respondents the benefit covers a wider portion of their total heating costs, on average between 20 and 50 percent, depending on the household's income and its overall expenses. For households that heat with wood, the share of expenses covered was more uniform (20–25 percent of total costs); those households in general view the benefit as a less substantial source of support compared to poor district heating and gas users. Still, both low- and middle-income recipients regard it as a valuable source of support. Most groups perceive the distribution of the HB to be fair; that is, they do not associate it with corruption or regard it as reaching ineligible households, despite occasional cases reported in the media. The few objections raised regarding fairness of social benefits involved Roma forging documents in order to qualify for the benefit; this situation was cited only by respondents in bigger cities, such as Bucharest and Iași. Roma

groups, on the other hand, complained about discrimination but mostly in regards to how it prevents them from finding employment and receiving help with filling out applications for social benefits.

14. Overall, respondents believe that government support for advanced energy-efficiency improvements is the best way to help households face rising energy tariffs. Support for energy efficiency is seen as most effective because it has a long-term effect on both managing costs and overall well-being, in that households do not have to compromise heating comfort in order to reduce spending. Social allowances, by comparison, are considered valuable for helping families manage month-to-month expenses but not for helping reduce bills in the long term. HB recipients find both the benefit and energy-efficiency financing equally important to their household, while non-recipients rank the prospect of energy-efficiency cofinancing much more highly. None of the groups expressed a particularly high preference for social tariffs or tariffs based on consumption thresholds, as they believe that households cannot easily control energy consumption.

15. All respondents are highly motivated to improve their dwellings' energy efficiency, and have made efforts to make such investments according to their means. The great majority of the middle-income participants have already installed PVC windows, and over half have also insulated outside walls and roofs. Less than half of the low-income participants have installed PVC windows, but those who have not have attempted simpler energy-efficiency measures such as using sponges and cushions to insulate windows. In addition, about a third of all low-income respondents have undertaken outside wall or roof insulation. Roma groups are the

most skeptical about the benefits of energy-efficiency investments, as their dwellings are often in very poor condition (many have broken doors or windows) and advanced energy-efficiency measures are not a priority for them.

16. Study participants described limits to energy price increases after which paying for energy would lead to hardship or delayed payments. Low-income groups considered a 10–15 percent increase in tariffs a critical maximum at which they would not be able to catch up on bill payments. According to them, even a lower level of increase would severely impact their ability to meet their basic needs (which some are already experiencing). Middle-income respondents more consistently stated that a 5–10 percent increase would not have a significant impact on their well-being, but an increase of 20 percent or more would be a critical limit at which they would be forced to delay or not pay bills.

17. All groups state that energy price increases should be matched with rising incomes, and that even under current prices, the quality of service should also improve. Participants largely prioritize affordability over quality. They state that even improvements in services would not make further tariff increases acceptable. The majority of respondents believe that services are already too expensive and that companies should be able to take care of maintenance and improve service quality under current pricing. An exception was the group of respondents from Bucharest who stated that they would be more likely to accept higher tariffs if they also saw some improvement in service quality. For this group it is important to know what the additional revenues from higher tariffs will be used for (for example, improvements in the electricity or gas network). It is also important to have better

interactions with energy providers so as to easily address queries, resolve grievances, and experience better customer service.

18. Respondents also voiced concern with service quality, even if this is not as important to them as the cost of services. These concerns refer mostly to the adequacy of heating/hot water provided, as well as to customer service.

In district heating, grievances include: (i) heat losses in the network that raise the cost relative to the quantity of heat consumed; (ii) not enough heating in colder fall and spring months, which requires some households to use additional electrical heating appliances; and (iii) the fact that the hot water temperature is low when it is first turned on and that the water needs to be run for a long time for the temperature to be right, which forces customers to pay for larger quantities of hot water. For gas, key grievances concern customer service—long wait times and the poor attitude of employees—as well as unclear bills. For electricity, unclear bills and added taxes (for renewable energy, television, and radio) were mentioned as most problematic, along with some complaints about frequent power cuts, power fluctuations, and quality of customer service. Participants frequently suggested reestablishing local offices that were closed and staffing them with more employees to address concerns or billing issues.

19. In general, the attitude of respondents toward tariff increases is resignation. Citizens have already experienced rising prices of energy and other goods and services, and believe this trend will continue. They also doubt their ability to influence the reform process and feel they have no voice in tariff decisions. As energy is vital to their life, most think they will continue to reduce spending on other basic goods to cope

with the costs. Some Roma groups mentioned their intent to disconnect from the services.

20. Awareness of energy sector reforms and institutions is limited mostly to the change in tariffs. Most respondents believe that issues related to energy reform are too complex to be understood by nonspecialists. Others, mostly urban residents, state that citizens have low interest in the sector because they do not believe they can influence decision making. Television and radio are cited as the main sources of information on tariff increases and they are widely trusted, given that prior announcements for increasing tariffs have so far proven to be true.

Section II: Policy Implications and Conclusions

21. The qualitative assessment leads to the following conclusions:

- Impacts of reforms have been felt unevenly across the country (for example, some district heating customers have experienced a much larger increase in tariffs than others). Thus, poor and vulnerable households that have been exposed to a more drastic increase in tariffs are disproportionately affected. Making mitigation more effective for such groups may include creating additional local support programs and prioritizing national support programs, (such as energy efficiency), among others.
- As costs across energy sources differ widely, and the rate of tariff growth for the same source differs across regions, the HB program's ability to protect the poor against rising energy costs is also likely to be uneven across groups. Additional

measures of support can be directed to poor households for whom the benefit does not cover a substantial part of expenses.

- The HB program is a widely known valuable source of support for recipients from both low- and middle-income groups. Restricting program access in the future to only the poorest is likely to be met with some resistance. The program has a good reputation for fairness and is not associated with corruption, which is likely to minimize such opposition. Better information on the program and support to access it in rural areas is one way to ensure eligible recipients are included.
- Roma groups, and Roma women in particular, would benefit from more dedicated communication on the HB program and eligibility requirements, as they report being least aware about the program.
- Energy-efficiency improvements are highly regarded as an effective way to help households face rising energy costs in the long term. Government support directed at thermo-insulation for poor and lower/middle-income groups can help decrease the burden on households in the long term, including those that are not eligible for social assistance.
- Improvements in customer services and interactions with consumers—especially in gas and electricity services—would have high visibility and can be achieved in the shorter term, versus other service improvements that require greater investment and are less likely to be noticed in the long term (such as reduction in network losses). Specifically, customers would like to see better

responsiveness to service disruptions and billing inquiries. Shorter wait times in gas or electricity offices are measures that can immediately improve customer satisfaction. Respondents frequently suggested reestablishing local electricity and gas customer service branches to facilitate access to the providers.

- Improving bill clarity may also have wide visibility and help improve trust. Taxes that are currently part of bills (such as the TV/radio tax) need to be better explained, or these funds need to be obtained through other sources.
- Mechanisms for collecting citizens' feedback on services and/or aspects of reforms that affect them directly can improve trust between customers and energy suppliers, as well as improve communication about and understanding of reforms.
- Communication about reforms in the sector should also include discussion of similar reforms and best practices in other EU member states, as well as a link to overall development of the country in relation to income and job opportunities. One of the greatest concerns offered by respondents is that energy tariffs are growing and the overall cost of living is increasing, while their incomes are stagnant or even declining, and that energy tariffs impact the price of other basic goods.

Section III: Ethnographic Interviews

CRAIOVA, URBAN AREA, APARTMENT

The household consists of three members: a wife, her husband, and their 8-year-old son. The wife (age 32) is employed part time as a

nurse. She works approximately four hours a day and earns 400 RON/month. Her husband is employed as a security guard in a bank, and his monthly income is between 600 and 650 RON. In 2011 and 2012 he had a second job as a family's private driver that earned him an additional income of 400–600 RON/month. At this time, the husband is only working as a security guard. They live in a two-room apartment in a block of flats.

The household uses district heating for heat and hot water, electricity for lighting and home appliances, and gas for cooking. Between April and September the household pays approximately 150–200 RON/month for water, gas, and heating combined, while during the winter (October–March) these expenses can reach 350–400 RON/month. The household does not have heat cost allocators that allow the family to control the consumption of district heating.

Electricity consumption is billed once every three months, and the household is then allowed another three months to make the payment. Electricity bills are relatively consistent through the year and can vary between 40 and 90 RON/bill, depending on the use of appliances. Sometimes the bill is higher when the family has had to delay the payment of a previous bill. The family is aware of recent energy tariff increases, and of the fact that energy prices will continue to grow.

Coping with energy spending

The household needs to delay bill payments in order to cope with basic expenses, especially in the winter. They have not paid their district heating bill since January 2013 and they are 3,000 RON in arrears. Over the past three years the household was unable to pay district heating

bills; in 2012 they accumulated a debt of 2,000 RON. The family took a high-interest loan from a credit union to pay the sum in one lump payment. Although they acknowledge that there are disadvantages to delaying payment as a coping strategy—such as the risk of legal proceedings and having their heaters or the gas and water pipes sealed off—they feel it is the only way they can cope with heating expenses. The couple has seen their incomes decline in recent years, while the cost of living (medicine, food, consumable goods) has increased considerably.

The household also delays paying electricity bills up to 30 days, which is the last day before receiving a disconnection warning. They have so far avoided being disconnected. Another coping measure is to reduce their electricity consumption; they no longer use the bread maker, do the laundry less often, and make sparse use of the electric iron. The family has also reduced food expenses (buying meat only for the child), cut back on buying toys or sweets for the child, and reduced spending on clothing and cigarettes.

Of all coping strategies, they rank delaying payment of the bills first, followed by borrowing money from nonbank entities and cutting back on smoking. The household is unable to adopt any energy-saving measures because they are unaffordable. The owner's association was at one time interested in having their block fitted with external thermal insulation, but the costs were estimated as too large not only for themselves but for their neighbors as well, so the project was dropped.

The household does not receive any HB, as they are ineligible due to unpaid taxes, bank loans, and 5-year-old driving tickets. They applied for HB in 2012, but the city hall rejected their

application on the grounds of unpaid taxes and tickets. They are not aware of any other support mechanism, such as the grant for energy-saving measures (thermal insulation), or other types of social welfare programs.

The household is aware that energy expenses will continue to rise but does not have a long-term plan for weathering the higher cost of energy. They can only plan their budget each day to the next. Their most likely plan for coping long-term is to try and get better-paying jobs, or perhaps to leave the country. Given their current financial status, they cannot manage even a 5 percent increase in their energy bills, and in no way could cope with a 10 or 15 percent increase.

GALDA DE JOS, RURAL AREA, PRIVATE HOUSE

The household consists of four members: the respondent (young woman, age 24), her brother, mother, and grandfather. The respondent is a college student in Alba-Iulia (nearby city) and is not employed at present. She had until recently been employed by a private company; however the company was sold and she was laid off. Her mother and brother both found work in the previous two weeks. They live in a private house that is owned by their grandfather. The only reliable source of income in their household is the grandfather's pension.

The household uses gas for heating and firewood as a secondary heating source for the grandfather's room. They also use gas for cooking. Electricity is used for lighting, for heating water in a boiler, and for other small home appliances. The respondent estimates that their monthly gas bills are now 60–70 percent higher than two years ago (or higher by approximately 100–150 RON/month). She also believes that their electricity bill is now higher by

approximately 50 RON/month compared to two years ago, but that the price of wood stayed the same throughout the last two years.

Gas bills are highest in the cold season, between October and March, when they vary between 250 and 400 RON. Between April and September, they vary between 20 and 100 RON, when gas is only used for cooking. Electricity bills range between 200 and 250 RON/month and do not vary substantially across the seasons. The electricity bill is higher (approximately 300 RON/month) in January and February—the respondent attributes this to lower temperatures in the house, due to which the water boiler needs longer to heat and uses more power. The electricity bills are lowest in August (about 30 RON), when the reconciliation bill is calculated and the supplier accounts for money that the household has overpaid in the previous six months. The household purchases wood once per year, for approximately 300 RON, most often in September, but limits their usage to heating during the coldest periods. In the summer, approximately 30 percent of the household's budget is spent on gas and electricity bills, while in the cold season approximately 70 percent of the household's budget is spent on wood, gas, and electricity bills. The highest energy expenses are recorded during December, January, and February. The high portion of household income that goes to energy expenses is explained by the fact that the only regular family income is the grandfather's pension; other informal or fluctuant revenues are not considered or reported by the respondent, thus the proportions could be inaccurate or slightly exaggerated.

Coping with energy spending

To cope with energy bills during winters, gas consumption is reduced by using wood to

heat the grandfather's room, as wood is a cheaper fuel. Other coping measures included borrowing money, giving up entertainment activities, avoiding driving the car, changing the family's nutrition patterns (meat is supplanted with potatoes), and unplugging the boiler when not in use. Sometimes, there are unwelcomed circumstances that make it even more difficult for the family to cope with paying the bills: medical issues, going to Alba-Iulia for the respondent's college courses, or other events in which the family is forced to postpone paying some bills. Even then, the household only needs to delay payment about once a year and has never been disconnected from electricity. They have not adopted any energy-saving measures such as thermally insulating the walls or changing doors or windows, because they have lacked the money to do so. The household receives heating benefits via discounted gas bills. The respondent is well aware of the application procedure and finds it moderately difficult.

Among various potential forms of social support, the respondent considers the grant (as a sum of money) for energy-saving measures to be the most efficient. She believes it would have the strongest potential to help the people most in need, due to its long-term impact on reducing the household's spending on heating during the cold season. The respondent said that such support should target a slightly wider circle of people than the HB, for example, households with income levels of up to 700 RON/month per family member.

The respondent is aware of the fact that energy prices are about to increase. She believes that even a 5 percent increase will make it more difficult for the family to cope, but there is nothing they can do about it except for continue to pay the bills and intensify their other coping strategies.

PITEȘTI, URBAN AREA, APARTMENT

The household consists of three members: the respondent (age 27), her husband, and their four-year-old child. The respondent works as a shop assistant and earns approximately 650 RON/month. Her husband makes 1,000 RON/month. They live in a three-room apartment that is owned by the husband's parents, in an apartment building that was built in the 1990s. The household uses gas for heating, cooking, and hot water generation, and electricity for lighting and powering home appliances. In the past year the family has installed a gas boiler for heating. They were previously connected to the district heating network, but the cost became unbearable. They were among the last residents in the building to disconnect from district heating because their bills rose a lot when other neighbors disconnected. Over the past two years the couple's wages have been reduced by approximately 200 RON/month due to challenges their employers have experienced from the financial crisis. The respondent believes that electricity and gas bills have grown in the same period, but cannot state by how much as the husband normally manages the bills.

During summer months energy bills account for about 10 percent of the household's income, but in winter months they reach approximately 35 percent. January, December, and February are the costliest months for both electricity and gas. The respondent states that if they switch off the heaters in some rooms at night, they pay around 300–350 RON for gas, and 150–200 RON for electricity. In March, April, and September, expenses seem to be lower for gas, at approximately 100–110 RON/month, and during summer months the household spends around 60 RON on gas, as it is only used for hot water generation and for cooking. Electricity is also more expensive in December, January, and

February (150–200 RON), as the gas boiler uses more power. Throughout the rest of the year, electricity spending is within the range of 50–80 RON/month.

Coping with energy spending

To cope with the difficulties of paying energy bills during winters, the household has reduced the amount it spends on clothing. On rare occasions the family borrows money from their parents, but must repay the loan in the following month. They reduce gas consumption by heating only one room in the winter, where all three family members sleep together. They have also installed PVC frame on the windows and used economy bulbs to save electricity. They believe that these measures have not substantially lowered their energy bills because the rise in tariffs has offset the gains. Therefore, their bills are about the same, both before and after the adoption of these energy-saving measures. The most significant impacts on the family's ability to cope with energy expenses are when a family member experiences health problems, or when there are delays in receiving wages. Loss of employment is perceived as being the biggest threat to the household's ability to deal with energy expenses. Although energy bills account for a third of the monthly budget, the family managed to avoid until now any delay in making payment, and so has never been disconnected from any energy source.

The household does not receive any form of social benefits (heating benefits, guaranteed minimum income, family grants) as they were deemed ineligible. The respondent thinks it is also quite difficult to receive such benefits, on the one hand due to the administrative inconveniences involved (numerous documents must be obtained from various institutions, which takes a lot of time), and on the other

hand due to the restrictive eligibility criteria (the example she quoted refers to the condition of not owning a motor vehicle that is newer than nine years). She believes that monthly cash assistance is an important source of support for poor families, and grants for energy efficiency would also be effective.

Regarding future tariff growth, the household is concerned because they do not expect any rise in their incomes; in fact, their wages may be further reduced. They think the most probable consequence is that they will cut back on food spending.

GĂVĂNEȘTI, RURAL AREA, PRIVATE HOUSE

The household consists of an extended family of seven people: the respondent (a day worker), his wife (employed), and their child (age 7); his mother (a housewife) and father (a pensioner); his brother (a day worker); and his grandmother (a pensioner). Six months prior to the interview, the respondent lost his job, which dropped the household's monthly income by 580 RON. Both he and his brother get to work only during the warm season, in agriculture, construction work, or helping other households; and they earn no income during the winter. They live in a brick house owned by the grandparents that consists of six rooms and a kitchen. They cook and eat meals together, and pool their resources into a single budget for all their food and energy expenses. The respondent and his wife pay the electricity bills, while his parents deal with purchasing the wood for heating. They rely on wood for heating and on wood and gas cylinders for cooking and heating water. They have a wood-fueled installation in the yard to heat water in the summer. Electricity is used for lighting and powering household appliances.

The household's largest expenses are for electricity; they pay bills that reach on average 170–200 RON, once every two months. There are no notable seasonal variations in electricity bills. In the last year, consumption happened to be higher in the summer, as the household was renovated (which involved the high consumption rates of a concrete mixer, power drill, and other powered tools), and they used an electric bread maker; however, such costs are rather circumstantial. In the respondent's opinion, electricity prices have increased in the last two years by approximately 10–15 percent. They do not notice an increase in wood prices. The price of gas cylinders has gone up slightly.

The household purchases wood for heating in the autumn, and also sometimes in the winter. In 2013, they bought 200 RON worth of wood in September, and the rest of the winter supply was sourced from a relative (they felled old trees from the person's property). In the previous winter they purchased 300 RON worth of wood in December, and one additional cubic meter in February (for 260 RON). This quantity was more than sufficient and some was leftover for the following year. The family prefers to buy wood during the spring and summer when prices are cheaper by 20–30 RON/cubic meter, but then their funds are diverted elsewhere to agricultural expenses (planting, plowing, and so on).

Coping with energy spending

To cope with energy expenses, the household sometimes purchases wood of lower caloric efficiency (branches), as it is cheaper at 140 RON for a wagonload. They cut back on buying clothes, nonessential foodstuffs, or soft drinks, and mostly consume food produced in their own household (poultry, pork, and other foodstuffs sourced domestically). The family does not borrow money and does not delay payments by

more than 2–3 days. The respondent estimates that energy expenses (electricity, gas, and wood) comprise approximately 20 percent of the monthly household budget. The household has not implemented energy-efficiency measures. They do renovations only to repair what is absolutely necessary. They use energy-saving light bulbs but do not see a difference in the bill; they cannot afford to replace appliances with more energy-efficient ones. The household does not receive any heating benefits. In the past year they did not apply as they had previously been rejected because they exceeded the income threshold for eligibility.

The family's concerns regarding the electricity supply is primarily its price, and some delays in receiving bills. One year ago, the household was billed 1,800 RON by the electric company, yet they could not clearly determine how such a significant amount could have been reached (whether they forgot to pay or some bills were lost in the mail). Following this incident, the family replaced the meter, and has since perceived some reductions in their bills, despite the tariff increase since then. The respondent believes that using renewable energy can reduce electricity tariffs. He also suggests some improvements in billing and customer service, namely ensuring that bills are received in a timely manner and that the company responds promptly to disruptions in service (they had previously been left without electricity for 2–3 days in the winter).

In the case of a 5 percent growth in the price of electricity, the household's strategy would be to reduce spending on clothing and foodstuffs, and probably to reduce the sums involved in agricultural works by only cultivating smaller surfaces. They would then redirect the money

saved toward paying energy bills. Should the price increase reach 10 percent, the family would be forced to delay payments, and might even risk getting disconnected. They estimate the household can only support a maximum increase of 2–3 percent, beyond which the ability to make payment will become quite difficult.

Kyrgyz Republic⁵¹

1. This report presents findings from a qualitative assessment of the poverty and social impacts of energy tariff reforms conducted between November 2013 and March 2014.^{52, 53} The objective of the study was to better understand how poor and middle-income consumers may be impacted by tariff reforms; their perceptions of energy sector institutions; and the perceived effectiveness of measures that aim to mitigate reform impacts. The qualitative work contributed to an activity that aimed to help the Kyrgyz Republic establish a sustainable, transparent, and equitable tariff-setting methodology that promotes adequate service quality and improved transparency and accountability in the power and heating sectors.⁵⁴

51 This summary note was prepared by Ekaterina Romanova. Data collection and initial analysis was carried out by M-Vector. This note is part of a series of qualitative assessments carried out for the energy sector by the Europe and Central Asia Social Development Unit in FY14. The task was led by Michelle Rebosio.

52 The local research “M-Vector” carried out the field work. The pilot was conducted in November 2013 to test and finalize the research instruments. The main field work was done in December 2014 and six gender-specific FGDs were conducted in March 2014.

53 The country context section of this summary report has substantially benefited from the Political Economy Analysis of Energy Sector in the Kyrgyz Republic (World Bank, 2012), the Energy Chapter of Public Expenditure Review for Kyrgyz Republic (World Bank, 2013b), and other supporting documents for the Tariff Setting Methodology work (ECSEG) and Energy Subsidy work (ECSP3).

54 Balabanyan, 2014.

2. This analysis is based on data collected through FGDs and individual interviews. Twenty-eight FGDs were held across the country with low- and middle-income households.⁵⁵ FGDs were conducted separately with households that receive social assistance to pay energy bills and those that do not. The sample also included consumers who live in mountainous areas and in plains, as well as consumers from rural and urban settlements. Topographic characteristics of the locale were considered in the sample because there are special energy tariffs for residents of high altitudes.⁵⁶ All FGDs were segregated by gender. Six additional FGDs had a specific focus on gender differences in energy consumption and the use of coping mechanisms. These took place in March 2014.

3. The main findings are as follows:

- The type of energy that households use is largely determined by household income, type of housing, place of residence, and weather conditions. Coal remains the population's main heating source, but there is growing diversification in energy sources for heating. Coal is more commonly used in the north. Low-income and rural residents depend on coal but increasingly supplement it with manure and other sources to reduce their heating bills. Urban residents rely more on electricity. Smaller families and the elderly report reverting back to electricity (from coal) for heating due to its greater convenience and affordability. Electricity

55 Low-income households were recruited to represent the bottom two consumption quintiles according to expenditure levels based on 2011 data; middle-income households were recruited to represent the third wealth quintile.

56 Residents in mountainous regions (with an elevation above 1,800 meters) receive lifeline tariffs for energy, and the rate of poverty is high in these areas.

use is increasing most rapidly in urban centers.

- Women are the main consumers of energy in households, as they perform most of the household chores (with the exception of heating-related tasks).
- Heating payments comprise a large share of a household's energy expenses. Heating bills are a particularly large burden for rural residents during the winter months, when savings from harvests are exhausted and employment options are limited.
- Despite the size of energy bills, respondents report paying bills on time to avoid incurring or accumulating debt, disconnection, high late payment and reconnection fees, and to avoid having their name publically displayed in a list of nonpayers.
- Middle- and low-income consumers believe that they pay unreasonably high energy bills, and that rich consumers avoid payments while enjoying high consumption levels.
- Respondents report seeking ways to improve their homes' insulation and energy efficiency, even when the measures they can afford are limited in scope and effectiveness. Low-income groups mostly reduce heating spaces and tape off windows, doors, and vents. The use of energy-saving electric devices or bulbs is reportedly cost ineffective because despite their high cost, the quality is poor.
- Participants recognize improvements to the energy sector and service provision. However, the willingness to pay higher tariffs reflects income level. Urban residents and middle-income consumers are willing to pay

up to 30 percent more if services continue to improve. At the same time, many think that even if tariffs increase, investments will not be made and resources will be diverted for personal gain.

Section I: The Kyrgyz Republic Country Context

4. The Kyrgyz Republic is an energy-rich country. The energy sector accounts for about 4 percent of GDP and 16 percent of industrial production. The cost of power generation is generally low, and relies on clean sources of energy (93 percent hydropower). However, the energy sector also faces a number of significant challenges, including weak governance, lack of transparency, poor financial viability, poor record keeping of financial flows and cost-recovery, and deficient service delivery. As a country with a continental climate, where winters last between November and March and winter temperatures range between -2.22°C and -11.6°C , heating reliability and adequacy are essential.

5. While energy tariffs are among the lowest in Europe and Central Asia, energy affordability echoes geographic disparity in poverty rates. There are significant variations in the poverty rates between regions of the Kyrgyz Republic but also within them, as well as between urban and rural residents. Bishtek, the capital, has lower poverty rates, while in mountainous areas, rural areas, and in the south, poverty rates are much higher. Similarly, availability and affordability of energy sources varies by region and between urban and rural settlements.

6. The country's primary energy sources are electricity, coal, and gas. Coal remains the main source for heating. The cost of coal reflects not

only the seasonal fluctuations in demand, but also transportation and storage costs. Access to electricity is almost universal. Subscription to networked gas service continues to grow.⁵⁷ In the south, the population relies more on electricity than on any other source of energy. Networked gas service is available in most parts of north of the country, but is mostly unavailable in the south. Gas is mostly used for cooking and as a supplementary source for heating. In rural areas, in addition to coal, residents also use wood, manure, and cotton stalks for heating purposes. Overall, the type of settlement and housing, socioeconomic status, and family size drive a household's choice of energy and heating source.

7. The energy sector lacks financial viability and suffers from poor service quality. The sector is a source of a substantial quasi-fiscal deficit: while the power sector alone accounted for 2.5 percent of GDP in 2011, its financial standing and quality of service are poor and underfunded. Continuously poor financing and the sector's low cost-recovery for almost two decades since independence has led to severe underspending on maintenance, rehabilitation, and related deterioration of already poor power and heating service quality. From 2009 to 2012, the consolidated distribution companies reported an average of 43 outages per day.

8. Energy tariffs remain relatively low and are a major cause for the above challenges. Power tariffs in the Kyrgyz Republic are among the lowest in the world and below cost-recovery. Similarly, heating tariffs are also well below cost-recovery levels, and are cross-subsidized by revenues from electricity exports, as well as by state and municipal budgets. There is a

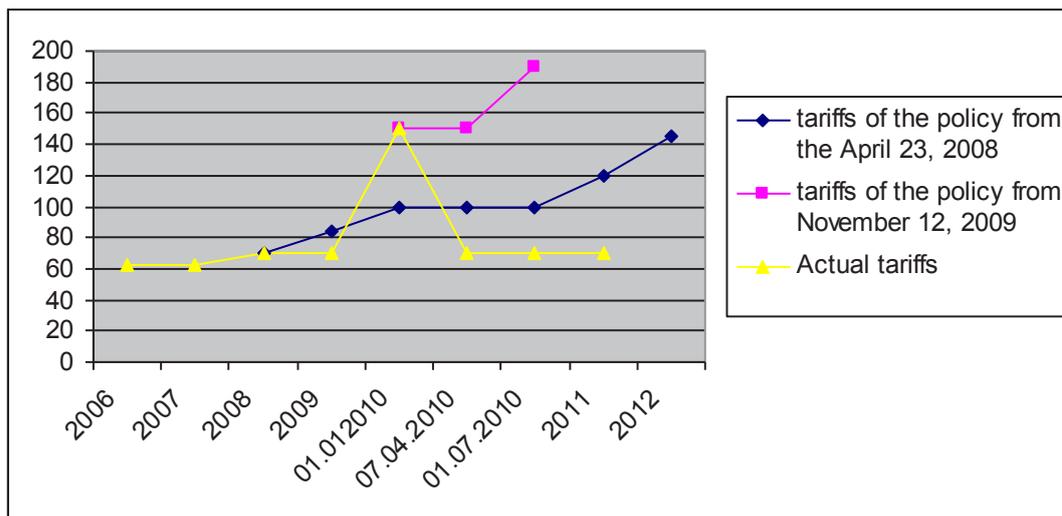
wide differentiation of tariffs both for end users and sector entities, which reflects changing and not-always-warranted social, economic, and political priorities that often fail to take the actual costs of power and heat into consideration when setting tariffs.

9. In 2010, attempts to increase energy tariffs triggered serious unrest that led to the overthrow of the government and the removal of the president. Since then, tariffs returned to pre-2010 levels (see Figure 1) and subsequent governments have been reluctant to raise tariffs, despite the fact that without additional funding the energy sector cannot make the necessary investments for the energy infrastructure's maintenance, upgrading, or expansion. A depleted infrastructure, lack of investment, and poor governance, along with growing demand (7–10 percent growth of electricity consumption every year) have led to poor quality of service and increasingly threaten the sector's financial stability. Recognizing these challenges, in 2012 the government introduced the energy development strategy for 2012–2017 to launch the energy sector's reform, which includes tariff reforms.

10. Social assistance mechanisms to mitigate rising energy costs vary and include cash transfers and reduced energy tariffs. Most social assistance payments are monthly cash-based transfers to recipients. There are also noncash programs, such as housing subsidies programs. These are subsidies or reduced energy tariff payments for various energy sources; payments are calculated according to the set norms of living space and utilities consumption standards and actual household income. While the existing social assistance and subsidy regulations cover a broad range of

⁵⁷ KYRGYZGAS, n.d.

FIGURE 19. ELECTRICITY TARIFFS FOR HOUSEHOLDS (TYINS FOR 1 KILOWATT-HOUR)



Source: Political Economy Analysis of Energy Sector in the Kyrgyz Republic, 2012. Note: Tyin is a local monetary denomination smaller than Sum; 100 tyins = 1 Sum.

vulnerabilities and needs, the targeting remains imprecise and there is no provision for indexation of payments if tariffs increase. Different government entities are responsible for different programs, and the quality and conditions of assistance consequently vary. There is also an overlap in eligibility requirements; for example, low-income or pensioners residing in areas of high altitude may qualify for several assistance programs.

Section II: Findings

ENERGY USE AND SPENDING PATTERNS

11. The qualitative study confirms that electricity, coal, and gas are the main energy sources in the Kyrgyz Republic. Electricity is used for a variety of applications and its consumption is particularly high in urban areas. Respondents report using an increasing number of electric appliances, including A/C and various heating devices. Coal remains the main energy source for heating, followed by electricity, wood,

and manure in rural areas. Coal-based stoves are additionally used for cooking and warming up food or water for washing, bathing, and other household needs. Networked and portable gas is used mostly for cooking and only in exceptional circumstances for heating.

12. Several factors influence consumers' choice of energy and heating sources, and the amount they consume. These include purpose; type and size of housing; and type and location of the settlement. Although electricity is broadly used throughout the country, urban residents and those who live in high-rise buildings rely on electricity for many more purposes—78 percent of urban respondents indicated that they use electricity as their primary heating source, compared to only 43 percent of rural respondents. Residents of high-rise buildings that have district heating use gas or electric heaters as supplementary sources when heating output is low. Residents of high-rises without district heating choose electric heaters for their reliability, safety, and ability to individually control them (see Picture

1). Electric water heaters or boilers have gained significant popularity and are widely used by different groups throughout the country (Picture 2). Their use, however, is still more common in urban areas. Networked gas is only available in urban areas and within these, in multistory buildings. Portable gas is more commonly used in rural areas as a supplementary source for cooking; in urban areas it is used for cooking only when there is an interruption in electricity and/or networked gas service. Coal is used for heating mostly in single-family homes in urban and rural areas. Generally, it is purchased from licensed suppliers. Notably, the use of coal is more common in the north. The use of manure and cotton stalks is observed only in rural and often remote or mountainous areas, where other energy sources are unavailable or prohibitively costly due to additional expenses for transportation and delivery. Rural residents report increasingly switching to manure as a supplemental source of heating.⁵⁸ Manure is mainly collected from a family's own livestock during the year and is prepared to be used as fuel for winter. On rare occasions, those who do not own livestock also purchase manure. Cotton stalks are available after the cotton harvest.

"I live in an apartment and district heating is not available in our building. We have a stove in the kitchen that was constructed to use coal for heating.

58 FGD moderators noted that in the north, respondents frequently referred to bio-gas as an innovative source for energy generation, but mostly for heating. It is based on the accumulation of gas produced by the fermentation of manure. The cost of equipment to produce bio-gas is still prohibitively expensive for the majority of rural residences. Only high-income rural residents are able to purchase the necessary equipment to produce bio-gas for household use.

Normally we heat up only during the nighttime, in order to keep the warmth over night. Our neighbors do not mind it [coal heaters], everyone understands that it is difficult to live in apartments without district heating. Many of our neighbors use coal stoves too."

FEMALE FGD PARTICIPANT
URBAN AREA

13. The majority of the population relies on two or more energy sources for heating. Respondents indicated that they prefer to combine different heating sources to either manage their energy expenses, or because it is more convenient to do so. Single-family houses have larger square footage and thus require more energy to heat the larger space. At the same time, in the multistory buildings connected to district heating, district heating's heating output, if available, is often insufficient, which requires this population to use more than one source for heating. Coal-based heating systems are quite labor intensive; in situations where residents need to heat a smaller space or quickly warm up a room, they may rely on electric or gas heaters. Those who mostly use electricity switch to supplemental sources to manage their heating bills. Rural residents use manure and cotton stalks, and in rare cases diesel generators, to further cut their coal expenses. The use of more than one energy source is common in northern households, while in the south it is more common for households to rely solely on electricity.

14. Energy consumption follows the region's



Left to Right: a portable stove that uses charcoal or coal; electric water heater or boiler, commonly known as Ariston for the name of the manufacturing company; electric heater

climatic patterns, with more energy used (and higher expenses incurred) during the winter months. Peak consumption for electricity, coal, wood, and manure occurs during the heating season. The only energy source that reaches its peak consumption during the summer is networked and portable gas, since it is used for cooking and canning, activities that typically take place during the summer. Additionally, the population, especially in rural areas, often cooks outside on open-flame portable stoves (see Picture 3) or traditional *tandyr* stoves, thus minimizing energy expenses during that time.

15. Heating expenses pose a notable burden on household budgets. Respondents indicated that they pay the most for the energy source they use for heating. Those who rely on electricity-based heating stated that their electricity bills are exceptionally high in the winter and that they are often unable to pay the whole amount, and so accrue debt. Electricity payments are made on a monthly basis, while coal is most commonly purchased in bulk once a year. Portable gas and wood are purchased as needed.

16. Consumption of energy is highest during weekends and evenings. Electricity, coal, and gas drive consumption during these times. Consumption is higher during evenings and

weekends because this is when more individuals are home. This is especially true of families with children and working adults. For much of the population, household chores are an evening and weekend task. Bathing and laundry are also weekend activities. These are often labor- and time intensive, as they require heating large amounts of water. Coal is the only heating source that is used consistently throughout the week. It is more commonly used in the evening to heat homes for the night. Residents of mountainous areas, where temperatures are lower, stated that they heat their homes twice a day, once in the morning and once in the evening.

17. The type of energy source used for heating differs depending on income level. While electricity is broadly used by all groups for various purposes (including heating), low-income respondents are more likely to use coal for heating. Low-income respondents also state that electricity is rather expensive and often unaffordable for them, and they thus avoid electricity-powered heating. Middle-income respondents prefer electricity for heating for its relative affordability and, most importantly, its convenience. This group also increasingly consumes electricity because of the growing number of appliances in their households. Greater use of new technologies in a household,

including A/C and electric heaters, requires more energy and incurs higher payments. These respondents admit generating high bills that are disproportionate to their budget, but explain that using such devices affords them a particular status, given that the use of these devices is common and even expected; they are therefore unwilling to stop or reduce their use, even if doing so will reduce their energy payments.

18. Women and men seem to have different patterns of energy consumption. Women are a household's main consumer of energy because they do most of the household chores, with the exception of heating-related tasks. Women use most of the appliances, but men have responsibility for heating the house, especially if coal is used for this purpose, since it is a labor-intensive task. Men are in charge of purchasing, delivering, and storing coal, as well as lighting the coal stove and keeping the heating temperature steady. Women report not heating the homes if they are there alone. They describe it as an energy-saving strategy, to heat the home only when men and other family members are there in the evening and on weekends. The presence of children, elderly, or adults requiring additional care significantly changes a household's heating

habits. In homes with only adults, temperature levels are kept lower. Overall, women seem to be more cognizant of saving energy and the need to make changes in the family budget when income no longer covers energy expenses.

COPING STRATEGIES

19. While energy service improved to some extent in the Kyrgyz Republic, years of instability and unreliable service have led the population to adopt multipurpose stoves that can work on different energy sources, such as coal, gas, wood, and/or electricity. A large share of the population in the country lives in single-family homes and lacks central or district heating and networked hot water. District heating and hot water services in multistory buildings operate poorly and with frequent interruptions, or have completely failed. The three stoves used most often by the population in the country are (i) traditional stoves; (Pictures 6 and 7), (ii) *kontromarka* (Picture 4); and (iii) universal stoves (Picture 5)—all designed for use with different energy sources.

20. Energy payments pose a burden on all observed groups of consumers, especially



Left to Right: A traditional coal stove, common in private single-family homes, especially in rural areas. Designed also for cooking and heating water; a three-way stove designed for different types of fuel (coal, gas, firewood, electricity). More common in urban areas and households with higher incomes; a traditional handmade stove, common in rural areas. Designed to use firewood, coal, cotton stalk, and so on; Kontromarka, a popular coal-based stove for old, private single-family houses common in small towns and rural settlements. Typically, it is installed in the center of the house for even distribution of heat.

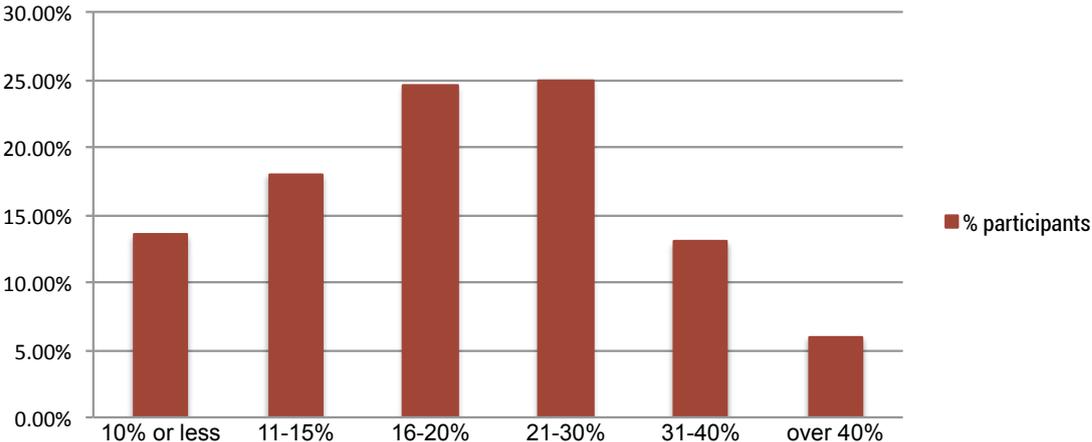
before and during the heating season. Based on self-reported information, households spend up to 45 percent of their monthly income on energy bills. Middle-income households report spending a higher share of their income on energy—around 30 percent compared to about 20 percent by low-income respondents. Middle-income groups also indicate a high level of energy consumption and lower adoption of energy-saving measures compared to other population groups, particularly low-income ones. Payments are higher in winter because of heating expenses.

21. Despite the fact that energy bills represent a high portion of household budgets, respondents report paying bills on time to avoid debt accumulation, disconnection, and late payment and reconnection fees. Respondents reported that electricity providers typically cut services shortly after an energy bill is overdue. FG participants complained that their service is cut within 3–4 days of not paying. Reconnection and late payment fees are often several times higher

than the payments that are due. Reconnection may also take a long time, which poses additional hardships; in winter months, not having electricity even when other heating sources are available significantly worsens quality of life. Respondents also noted that electricity providers publicly shame those who have not paid their bills. A list of names of consumers with arrears are displayed by building entrances and announced publicly in media or schools.

22. To afford energy payments, the population copes in a variety of ways, mainly by limiting energy consumption and practicing advance budgeting. Respondents acknowledge that the amount of their energy bills depends on the time of the year, and 62 percent of respondents said they take that into account when planning their household budget. Advance payments are made when the bills are lower, largely over the summer. Thus, an accumulated extra balance on the account helps cover the difference of higher bill amounts in winter. Such practices are more common for urban areas. In rural areas,

FIGURE 20. PERCENT OF MONTHLY INCOME SPENT ON ENERGY BILLS, % (N=200)



Source: FG discussions 2013-2014; M-Vector. 2014. "Qualitative Assessment of Energy Reforms in the Kyrgyz Republic." Bishkek, Kyrgyz Republic. Background report commissioned by the World Bank.

“Debtors are shown on TV, in public announcements, employers are being informed and even schools where children of debtors studying are being informed about nonpayment of the energy bill. In other words, they would do anything to shame a debtor and it is a very effective measure for conscientious people.”

MALE FGD PARTICIPANT
MIDDLE-INCOME, URBAN

“The deadline for the payment is the 25th of each month, so 26-27th controllers are walking around the streets and cut off all debtors. Even if consumer pays on the 26th or 27th, next bill will show an unpaid balance anyway.”

FEMALE FGD PARTICIPANT
MIDDLE-INCOME, RURAL

“Poor families never delay the payments, because they cannot afford penalties and reconnection costs, so they have to find the money no matter what. They would rather not pay for coal, but [paying for] electricity is a priority.”

FEMALE FGD PARTICIPANT
MIDDLE-INCOME, RURAL

“Men usually ask women to borrow money and they [men] will return the money, in turn.”

FEMALE FGD PARTICIPANT
LOW-INCOME, URBAN

the population often has to sell some livestock to afford their bills during the heating season. Those who rely on coal indicated that they try to buy coal once a year, and in advance of the heating season, if storage space allows. Once the heating season starts, and especially during the extreme cold years, the price of coal may go up sixfold. Those who buy coal in smaller

amounts pay more for it. Transportation and the need for storage are additional coal-related expenses. In addition to advance payments and coal purchases, respondents state that they also save to ensure their bill is paid on time and in full in winter. Moreover, to manage energy bills and ensure they are affordable, 75 percent of respondents said they try to reduce

TABLE 2. COPING MEASURES REPORTED BY RESPONDENTS

MEASURES	PREVALENCE (%)	IMPORTANCE/ RATING
Conserving energy	75	1
Budgeting for energy expenses	62	2
Selling food or livestock	17	3
Borrowing from friends or family	35	4
Saving money/reducing spending	27	4
Prepaying bills	8	5
Other	30	6

Note: Multiple answers allowed (N=2014). Importance is listed according to ranking respondents assigned to each measure (1—highest priority; 5—lowest).

Source: FG discussions 2013-2014; M-Vector. 2014. "Qualitative Assessment of Energy Reforms in the Kyrgyz Republic." Bishkek, Kyrgyz Republic. Background report commissioned by the World Bank.

their consumption of energy. When they cannot afford to pay their bills, respondents prefer to borrow money from friends and family, pay in smaller increments, sell produce from their garden plots, sell household items or livestock, or get short-term petty jobs to supplement their typical income stream. Respondents noted that women are more likely to borrow money or are given the responsibility of borrowing money, because such an action by men is considered shameful.

23. Participants prioritize energy payments over other necessities and cut spending on clothes, food, and traditional celebrations. Eighty-nine and fifty-two percent of respondents indicated that they cut expenses for clothing and food respectively. While it is not a preferred way to save, reducing spending on food is common. People explained that they do not buy brand-name or higher-quality products, and rely on produce they grow on their land plots. It is more common for rural residents to substitute purchased food with

homegrown or homemade ones, and they are thus better able to save cash for energy payments and fuel purchases. Spending on other household needs, such as repairs or car maintenance, is also reduced. Additionally, the population cuts spending on traditional celebrations, such as *tois*.⁵⁹ *Tois* are usually held in the fall after the end of the harvest season. They have significant cultural and family value and are highly regarded; as such, the population invests a great deal of resources in these celebrations. Notably, respondents state that they increasingly choose to hold back on *tois*, limiting their contributions or even not attending them to avoid spending money (Table 2).

24. All respondents seek ways to improve the insulation and energy efficiency of their homes, even when the measures are limited in scope and effectiveness. The range of such measures includes (i) lining and covering windows and

⁵⁹ A *toi* is a traditional celebration for various occasions, such as a wedding or the birth of a child.

TABLE 3. ITEMS/ACTIVITIES REDUCED TO COVER ENERGY BILLS

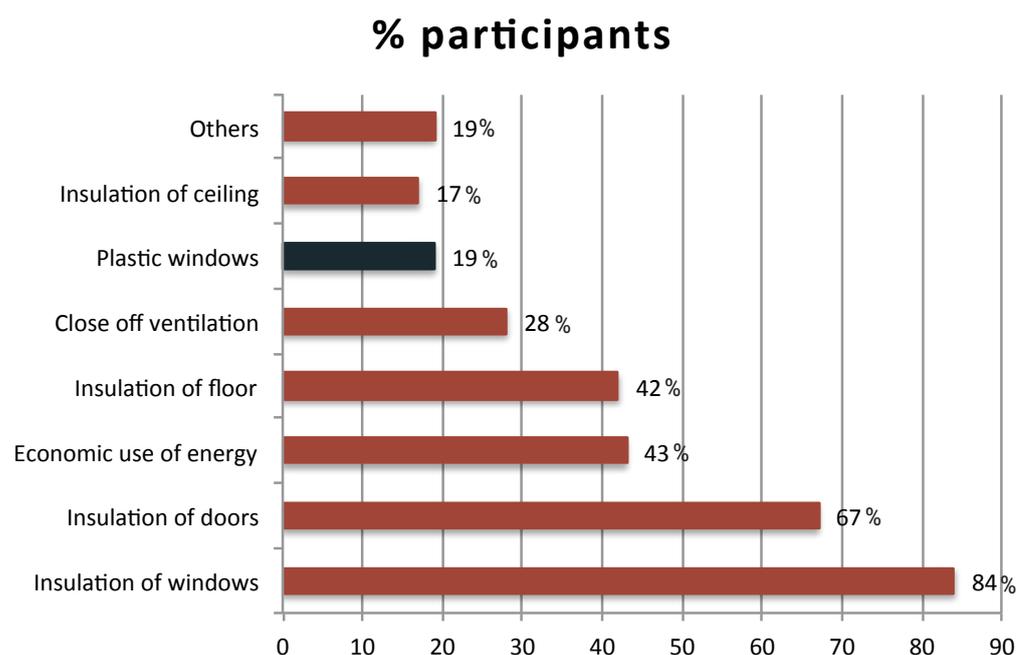
Expenditures	Prevalence	Importance
Leisure (tois)	70%	1
Clothes	89%	2
Secondary goods	35%	3
Food	52%	4
Other	27%	5

Note: Multiple answers allowed (N=204). Importance indicates priority ranking assigned by respondents to each item (1–highest priority; 5–lowest).

doors with insulation tape; (ii) putting rugs on floors and walls; and (iii) closing ventilation vents. The choice of measures often (but not always) reflects income levels. Middle-income populations report installing plastic windows and doors more often than low-income groups. These measures were described as the most effective way to improve a home's insulation and heating efficiency. Low-income groups mostly resort to reducing the amount of space

that is heated, and tape off windows, doors, and vents. They also mention that in cases where they cannot afford to properly heat a room, they use bottles filled with hot water and other such devices to heat beds before going to sleep. Although external building insulation is rather effective, its use is limited due to differences in income among residents of multistory buildings, and the fact that building residents make varying degrees of commitment to costly

Figure 21. Measures used by respondents to improve insulation and energy efficiency (N=204)



Source: FG discussions 2013-2014; M-Vector. 2014. "Qualitative Assessment of Energy Reforms in the Kyrgyz Republic." Bishkek, Kyrgyz Republic. Background report commissioned by the World Bank.

improvements. Energy-saving equipment and light bulbs are not popular across different groups of consumers, due to their high costs, poor efficiency, and short durability.

25. Men and women have different roles when it comes to reducing energy costs. Men are described as being responsible for insulation and home improvements, while women are in charge of managing budget savings. Male participants expressed a great deal of interest in learning about insulation and receiving insulation materials. Women were more likely than men to say that they use different coping mechanisms and to cut energy use. This is most likely related to the fact that women, even those who are not the head of the household, are the main energy consumers, and thus find themselves in a better position to know where savings can be made.

SOCIAL ASSISTANCE PROGRAMS AND ENERGY SUBSIDIES

26. Respondents demonstrate limited awareness of social assistance programs. Both recipients and non-recipients of different social assistance programs are unaware of the programs' scope, targeting, and application procedures. They do not know where and how to get information. Social assistance offices are often only located in urban centers and there are few or no representatives in rural areas, especially in remote villages. Rural residents explained that they do not have access to information where they live, and traveling to urban centers is often too expensive and difficult. Urban respondents seemed to be more informed about social assistance programs, eligibility, and application requirements, and have greater access to such information.

A male respondent from a mountainous village said that he had to travel to the city 10 times to collect all documents and spent more than Som 5,000 (US\$100) in travel expenses alone. "My friend has no hand and every year he proves that his arm has not grown back like a lizard's tail. This is ridiculous."

MALE FGD PARTICIPANT
LOW-INCOME, URBAN

27. Overall, the observed population expressed a highly negative view of the social assistance offices and the existing programs. A highly cumbersome and bureaucratic process deters many potential beneficiaries from applying and fosters negative views of social assistance mechanisms and social service providers. Respondents reported facing several challenges during the application process. A number of programs require annual confirmation of eligibility. Applicants must collect all required documents within limited and often conflicting time periods. Social assistance offices are not available in many rural settlements and applicants have to invest additional time and money traveling to submit documents. These expenses sometimes exceed the amount of social assistance an applicant would eventually receive. A lack of transparency, poor communication and information exchange, and meager amounts of assistance all contribute to high levels of mistrust and a perception of unfairness.

28. While the list of categories under which people may qualify for social assistance is quite extensive (and people's eligibility often overlaps between categories), respondents believe it does not target all those in need. Stricter as well as shifting eligibility requirements disqualify a number of applicants who previously received social assistance. Respondents note that young families with small children are in most need yet are ineligible for any type of assistance or housing subsidy. These families often lack stable employment and struggle to pay their utility bills. The elderly population also finds it hard to manage energy payments on their small pensions. The amount of assistance they receive in addition to their pension does not meet their actual need.

"In 2006 there were about 800 beneficiaries in this village; nowadays it is less than 300. More than 600 people were deprived of the benefits. At first, those who had a color TV and a fridge in the house were denied social assistance. Now even families with pensioners will be denied social assistance or other benefits. Also, young families are unable to receive assigned benefits because officials will reject their claims. Potential beneficiaries are told to ask their parents and relatives for support."

MALE FGD PARTICIPANT, RURAL

29. Respondents do not associate recent benefit "top-ups"—which have been instituted to help the population cope with energy price increases—with increases in tariffs. Respondents who used to pay reduced utility tariffs recognized that they currently pay the full amount, but they do not associate that with increases in their social assistance payments. The increases were attributed to the indexation of social assistance payments. Respondents state that the new payment amounts remain rather low.

"Usually women receive the benefits, because they are not working. For men there are more reasons to reject the claim because they are able to work."

MALE FGD PARTICIPANT
LOW-INCOME, URBAN

30. Women tend to apply for social assistance more often than men. This may be indicative of the fact that (i) women require greater social assistance; and (ii) women are more likely to qualify due to cultural expectations and gender norms. Respondents explain that it is more common for women to not work, and consequently they have better grounds to qualify for social assistance. At the same time, respondents revealed that gender norms make it acceptable for women to receive help from the government, but not men. There is shame and stigma associated with men receiving social assistance. These norms often prevent men from applying, even if they qualify. As the main providers, men are expected to have gainful employment/steady income. Men in urban areas are even less likely to apply for social assistance due

to the belief that there are more employment opportunities in the city.

RELATIONSHIP WITH ENERGY PROVIDERS

31. The quality of energy service and energy company operations was assessed as average/good, despite complaints about poor quality of service and provider responsiveness. Almost half of the respondents rated energy provider performance (both for electricity and district heating) as a 3 (on a 5-point scale), and one-third rated them as a 4. Respondents recognize there have been some improvements in energy provision, especially in electricity, and there are fewer illegal connections compared to even just a few years ago. Although the availability of services improved, the quality of such services leaves much to be desired. There are frequent service interruptions and voltage fluctuations that often damage electrical equipment, and the heat output of district heating is unsatisfactory. Respondents complained that service providers refuse to take responsibility and compensate for damages. Additionally, rural residents complained about a lack of clarity in billing and slow repair efforts when service suffers interruptions. Residents of multistory buildings in cities stated they have limited or no access to their meters and have no way to check that their bill is accurate. Bill formats are inconsistent across the country; in urban areas bills tend to be more comprehensive and provide information on usage and tariffs, while in rural areas bills provide limited information and are sometimes handwritten.

32. Controllers are key mediators between providers and consumers. Controllers tend to be the face of the energy company. The quality of relationship with the controller determines

how consumers evaluate the quality of service. A controller's responsibilities include collecting fees, ensuring proper service provision, and providing information about services to customers. Controllers are the first and often the only person with whom customers interact regarding questions or complaints. Respondents evaluated energy providers poorly in cases where there is no or a poor relationship with the provider, and higher where there are well-established relationships. In smaller communities, mostly in rural areas where the population tends to know each other, the relationship with the controller is much better. Rural respondents state that their controller tends to be more understanding and lenient when it comes to late payments. In urban areas, on the other hand, controllers do not usually know the customers they serve. They tend to be much stricter with late payments and immediate disconnection. Lack of familiarity with a controller also creates opportunities for fraudulent activities. For example, some respondents described situations when a controller collected fees and later disappeared with the money, leaving residents with unpaid debt.

ACCEPTIBILITY OF ENERGY REFORMS

33. The population demonstrates a high level of awareness of upcoming energy tariff increases, yet displays little support for such government actions. Respondents stated that they learn about upcoming reforms from mass media—mostly television and newspapers, less so from radio or the Internet. About 30 percent of respondents agreed to the idea of paying up to 30 percent more, but only 2 percent said they would pay if tariffs grow by more than 30 percent. Most of the latter are middle-income urban dwellers. Consumers regard the Kyrgyz Republic as an

energy producing country, where energy should be available to residents at low or no cost. Some respondents indicated that an increase in employment numbers should accompany any increase in tariffs. The respondents worried that an increase in energy tariffs would also trigger spikes in prices for other goods and services, leading to inflation.

34. The level of support for reforms mirrors population income levels and the urban and rural divide. Middle-income and urban residents demonstrate greater support for and understanding of the need for changes in both electricity and district/central heating sectors. Rural residents stated that they would not be able to afford any additional or increased energy payments, particularly for electricity. Such differences may be attributed to a number of factors. First, urban and middle-income residents consume more electricity, and, consequently, depend more on quality of service. Frequent interruptions and voltage fluctuations result in equipment failure and significant financial losses. Since district/central heating is available predominantly in urban centers, rural residents consume less electricity and do not depend on it for heating. Moreover, district or central heating is largely unavailable in rural areas. Second, urban residents are more informed about consumer rights and expect the better service provisions that come with greater investments.

35. Women demonstrated a lower interest in and awareness of energy sector reforms, yet are more likely to contact energy providers for information or to address a claim. All respondents admitted that men show more interest in the reforms and follow the news on TV, radio, or newspaper. Women stated that

they are too busy with their household chores and do not have time to follow and understand the reforms and their implications. In rural areas, women are less likely to interact with a controller, because they are not responsible for making payments. The fact that women rated energy company performance higher than men was attributed to their low level of awareness of the reforms. When asked who is more likely to contact an energy provider, however, the majority of respondents said women.

36. Respondents believe that they have no impact on the decision-making process as related to energy sector reform. Poor relations with service providers and ineffective communication and grievance redress mechanisms foster the population's negative views of providers. The harsh treatment of late payments and a lack of established relations with controllers generate a lack of trust in providers and low support for the reforms.

37. Across the Kyrgyz Republic there is a strong perception of unfairness regarding the amount of utility payments. Middle and low-income consumers believe that the payment burden lies largely on them, while rich consumers avoid payments and enjoy high consumption levels. The respondents stated that rich consumers and business owners use their power, privileged positions, and connections to get out of paying their utility bills. The perception that these groups are exempt from payment reinforces a sense of social injustice and a lack of trust in the government and reform initiatives.

Section III: Recommendations

38. The qualitative assessment results lead to the following conclusions and recommendations:

- Increased prices of electricity are likely to result in increased use of coal among the poor. Many in this group already use coal for heating. The price of coal is likely to rise together with an increase in energy tariffs. Tariff setting should consider the compound impacts of increases in all sources of energy, including ones in which prices are not set by the government.
- Rising electricity prices are also likely to lead to discontent among the middle class. This group largely uses electricity to power their appliances, and the use of these appliances is not seen as optional. This group, however, could respond positively to improved services. A communications campaign and social accountability activities could make it possible for the middle class to see how higher tariffs result in better services, which could improve the acceptability of the reform.
- Because different regions rely on different energy sources, increases in the cost of specific energy sources will have different impacts, potentially causing grievances among different social groups. If certain measures affect specific groups more than others, there may be a need to adjust the measures or to design communications campaigns to explain the reasoning for specific decisions.
- Much of the discontent around energy prices is based on the perception that higher-income individuals do not pay their fair share of energy costs. Reforms must ensure that higher income brackets pay their fair share of energy bills. Increasing the transparency of billing and payment may help achieve this outcome.
- Complaints about the lack of clarity of bills also lead to mistrust of the energy sector. It is important to simplify bills and clarify how these are calculated. It should be easy for households to determine how much energy they can afford to consume. It could be necessary to work with controllers and build their capacity to provide services and explain energy billing to consumers.
- Some consumers cannot afford to pay their bills during the heating season, and fall into debt to avoid late payment. Energy companies could put in place a system of tariffs that allows consumers to pay for their winter heating expenses during other seasons, helping households avoid debt.
- Grievances against the energy sector are also related to delays in repairs or lack of clarity over who is responsible for making repairs to appliances, networks, and so on. Communications activities could clarify the different roles and responsibilities of energy sector providers. It would also be useful to create a system for informing energy providers of needed repairs that can be tracked by consumers. This system could allow companies and consumers to monitor the time needed to make repairs.
- Lower-income households resort to the use of wood and coal for heating when electricity and gas are unavailable or unaffordable. One form of assistance for these households could be activities to help them buy in bulk in order to save money. This could be done through support to community-based businesses that sell coal and wood at the local level in harder-to-reach rural areas. Urban residents who use these sources of energy could also be

supported by the community warehousing of wood and coal purchased in bulk by residents.

- Energy-efficiency measures are limited because they are unaffordable. Efforts to support the efficient use of energy by finding ways to make insulation, plastic windows, and other measures affordable, perhaps through targeted credit programs, could increase energy efficiency. Energy-efficiency activities in multiapartment buildings could be supported by creating residents' associations and helping

them design and pay for energy-saving interventions.

- The effectiveness of social assistance as a mitigation measure is limited by the complexity of applying for and receiving benefits. Consumers also do not link increased benefits and tariffs. Communications mechanisms can be used to explain the process and eligibility for receiving benefits and to link increases in benefits with increasing prices of energy. In addition, it may be useful to simplify the process for applying for social assistance.

This research was conducted in eight ECA states in which the World Bank has engaged in energy policy dialogue through analytical or lending projects. Comprehensive poverty and social analysis of energy subsidy reforms has been conducted in these countries, including quantitative and qualitative research. A qualitative study was implemented in each state to examine citizens' perspectives on the social impacts of reforms, as well as their knowledge of and attitude toward the reforms. This report distills findings from these qualitative studies.

The *FGD guides* included questions along four general themes:

- (i) access to energy sources and patterns of energy use within the household;
- (ii) coping with rising energy costs, including applying energy efficiency mechanisms or using alternative energy sources;
- (iii) perceptions of and experience with social assistance and other support programs; and
- (iv) knowledge of and attitude toward the reforms.

In-depth interviews (IDIs) were conducted with key informants to gather their opinions on the same topics and balance the views of citizens with those of relevant institutions. Key informants included energy utilities, social assistance workers, local government representatives and, where relevant, informal local leaders and civil society respondents.

Ethnographic interviews (EIs) were conducted in 3–4 households in each country to better illustrate the issues pertaining to managing energy costs; these were further illuminated through personal stories and photos. Respondents for ethnographic interviews in each state were selected to represent typical but different household situations; for example, low/middle-income households using district heating, solid fuels, and electricity for heating.

A local research firm conducted field research in each country. While the same discussion guide was applied in all states, some modifications were introduced after the methodology was pilot tested to ensure that the questions were understood by respondents and were sensitive to the local context.

Country samples were selected in cooperation with local research teams and World Bank staff involved in energy sector reforms from other practices to include a variety of energy

consumers. All country samples included groups in a large city, a small town, and rural locations; groups with households using different types of energy as a main heating source (such as district heating, wood or coal, gas, electricity); and households in different geographic locations and/or climate areas, such as mountainous or valley regions. In order to capture the views of specific groups of interest, sample categories were further segregated to include beneficiaries and non-beneficiaries of social assistance; representatives of ethnic

minorities; and low- and middle-income group respondents. Low-income respondents were recruited to represent roughly the bottom two quintiles, and middle-income ones to represent the third quintile (in the Kyrgyz Republic, the third and fourth quintiles). A detailed structure of FG and interview samples by country is available in the full country background reports, and can also be found as an annex in World Bank (2015) *Toward Gender-Informed Energy Subsidy Reforms: Findings from Qualitative Studies in Eight ECA States*.

SUMMARY SAMPLE FOR QUALITATIVE RESEARCH:

COUNTRY	# FGDS	FG MAIN CATEGORIES	# IDIS	# EIS
Armenia	30	<ul style="list-style-type: none"> - 15 urban, 15 rural - 26 low-income, 4 middle-income - 8 recipients, 22 non-recipients of family benefits - 14 employed, 16 unemployed - 17 with, 13 without gas supply - 16 women, 11 men, 3 mixed 	12	-
Belarus	18	<ul style="list-style-type: none"> - covering 6 development regions and the capital - 12 urban, 6 rural - 12 low-income, 6 middle-income - 4 recipients, 8 non-recipients of social assistance, 6 mixed - 15 district heating, 3 gas or wood as main heating source - 3 women, 3 men, 12 mixed 	11	3
Bulgaria	29	<ul style="list-style-type: none"> - covering 6 development regions and the capital - 12 big city, 8 small town, 9 rural - 15 low-income, 8 middle-income, 6 mixed - 5 district heating, 14 wood/coal, 3 electricity, 1 gas, 6 mixed - 3 Roma - 13 women, 10 men, 6 mixed 	10	3

COUNTRY	# FGDS	FG MAIN CATEGORIES	# IDIS	# EIS
Croatia	20	<ul style="list-style-type: none"> - covering north, central, eastern, and Adriatic Coast regions, and capital - 15 urban, 5 rural - 12 low-income, 8 middle-income - 4 recipients of social assistance, 16 mixed - 5 district heating, 4 gas, 8 wood, 3 electricity as main heating source - 2 Roma - 10 women, 10 men 	9	3
Kyrgyz Republic	37	<ul style="list-style-type: none"> - covering all 7 districts and the capital - 18 urban, 19 rural - 28 low-income, 9 middle-income - 12 recipients, 12 non-recipients of energy compensation, 13 mixed - 15 women, 15 men, 7 mixed 	-	-
Romania	32	<ul style="list-style-type: none"> - covering all 7 development regions and the capital - 11 big city, 11 small town, 10 rural - 14 low-income, 8 middle-income - 10 recipients, 13 non-recipients of heating benefits, 9 mixed - 10 district heating, 9 gas, 11 wood/coal, 2 other as main heating source - 3 Roma - 16 women, 16 men 	12	3
Tajikistan	28	<ul style="list-style-type: none"> - covering all 4 districts and the capital - 14 urban, 14 rural - 7 apartment, 17 house residents - 14 men, 14 women 	11	4
Turkey	16	<ul style="list-style-type: none"> - all in southeastern Anatolia region - 8 urban, 8 rural - 6 low-income, 4 middle-income, 6 businesses, students, local leaders - 5 women, 5 men, 6 mixed 	41	-

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