



HOUSEHOLDS

GOOD PRACTICE NOTE 4

Incidence of Price Subsidies on Households and Distributional Impact of Reform — Qualitative Methods

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ACRONYMS AND ABBREVIATIONS

| | |
|--------------|--|
| CNG | Compressed Natural Gas |
| DUC | Deltoran Utility Commission |
| DNOC | Deltoran National Oil Company |
| ESMAP | Energy Sector Management Assistance Program |
| ESRAF | Energy Sector Reform Assessment Framework |
| FGD | Focus Group Discussion |
| HAP | Household Air Pollution |
| IDI | In-depth Interview |
| LPG | Liquefied Petroleum Gas |
| NGO | Nongovernmental Organization |
| MW | Megawatt |
| NTC | National Transmission Company |
| OECD | Organisation for Economic Co-operation and Development |
| TOR | Terms of Reference |

1. INTRODUCTION

One of the most challenging aspects of reforming energy subsidies is when such a reform raises energy prices paid by consumers. Good Practice Note 3 discusses how to quantify the direct and indirect effects on households of reforming consumer price subsidies. The contribution of the findings of the quantitative analysis to the reform design and implementation can be greatly enhanced when quantitative analysis is complemented by qualitative research. Qualitative research in the context of energy subsidy reforms can explore how individual households continue to meet their basic needs for energy, as well as for other essential goods and services affected by higher energy prices. By delving into the narratives of households in an open-ended inquiry, qualitative research tools can reveal a wide range of vulnerability factors and help identify vulnerable segments of the population that may not be commonly captured in quantitative surveys. For example, a qualitative study may identify the need to look into seasonal patterns of energy use, prompting future surveys to inquire about summer and winter costs of energy. A qualitative study can present the views and experience of small or excluded groups, such as slum-dwellers, ethnic minorities, indigenous people (IP), persons with disabilities, and residents of remote rural locations, among others. Such groups may have distinct energy use patterns and face specific vulnerabilities to the reform and/or barriers to accessing mitigation measures but due to their small size or factors of exclusion may not be adequately represented in national surveys. Overall, qualitative tools provide an opportunity to take into account contextual factors and look more deeply into households' specific circumstances, allowing them to

describe how they experience impacts in their lives.

Good Practice Note 1 defines an energy subsidy as a deliberate policy action by the government specifically targeting energy that reduces the net cost of energy purchased, reduces the cost of energy production or delivery, increases revenues retained by energy producers and suppliers, or does any combination of these. Because of unintended consequences of energy subsidies, even policies designed to reduce prices paid by consumers do not necessarily result in lower prices, although in many cases they do. Even if prices are markedly lower, subsidies may create energy shortages, limiting energy availability and hence consumption. In relatively rare circumstances, subsidy reforms can even lower prices paid by consumers—for example, if producer subsidies were keeping prices artificially high, or if black marketing of subsidized fuels were pushing up prices to levels above what a deregulated market might have delivered.

In most cases, energy prices rise following consumer price subsidy reforms. Good Practice Note 3 shows that where subsidized energy was used as an intermediate good, prices of other goods and services also rise through indirect effects. Even if the poor were purchasing little subsidized energy—for example, in Sub-Saharan Africa, only one-third of the total population has access to electricity, and that share is much higher among the poor—they are frequently harmed through higher prices of goods and services that are in the basket of goods they consume, with food and public passenger transport



frequently being the two most important expenditure items. By contrast, in Europe and Central Asia, energy for heating is essential in winter, and the direct effects of price subsidy reforms can be substantial, harming the poor disproportionately.

In most cases, energy subsidy reforms result in higher prices for consumers. Good Practice Note 3 shows that where subsidized energy was used as an intermediate good, prices of other goods and services also rise through indirect effects. Even if the poor were purchasing little subsidized energy—for example, in Sub-Saharan Africa, only one-third of the total population has access to electricity, and that share is much higher among the poor—they are frequently harmed through higher prices of goods and services that are in the basket of goods they consume, with food and public passenger transport frequently being the two most important expenditure items. By contrast, in Europe and Central Asia, energy for heating is essential in winter, and the direct effects of price subsidy reforms can be substantial, harming the poor disproportionately.

This good practice note provides those working on consumer price subsidy reforms, in particular social scientists, with hands-on, practical guidance for using certain qualitative research tools to help fully understand the distributional impacts of higher prices on households. It focuses primarily on the direct effects of energy price subsidies (that is, higher energy prices), which are especially pronounced in middle-income countries. The good practice note aims to illustrate how qualitative research tools—focus group discussions (FGDs) and in-depth interviews (IDIs)—can be utilized in the context of energy subsidy reforms. By using such tools, this note aims to guide researchers and policy

advisers to better understand the energy use behavior of households, the impacts of higher energy prices on their lives, the ways households may adjust their energy use behavior in response, and the consequences of such coping strategies. Using qualitative approaches is well suited for gathering insight on the experience of small or excluded groups as research tools can be tailored to specific segments of the population. Through their open-ended style of inquiry, qualitative methods are also well-positioned to uncover a wider range of impacts, including ones that may not be anticipated by researchers or policy makers. The tools described are geared toward a rapid qualitative assessment, although other tools, such as ethnography and participant observation, can also be used. Participant observation requires a longer time frame and deeper immersion of the researcher in the field.¹

This good practice note assumes a certain level of familiarity with the qualitative research methodology and, therefore, will be of most benefit to social scientists and research firms contracted to undertake the qualitative research. While the note emphasizes the added value of using qualitative research tools, it does not claim that these issues can be studied or understood only by using qualitative tools. On the contrary, the good practice note argues that using both qualitative and quantitative tools is the best practice, since it helps teams reach a comprehensive understanding of the poverty and welfare impacts of energy price subsidy reforms.

Qualitative and quantitative tools can be integrated in a parallel, sequential, and iterative way (Rao and Woolcock 2003). In parallel approaches, the quantitative and qualitative research teams work separately but compare and combine findings during the analysis (Rao

and Woolcock 2003). In this case, qualitative findings can be used to inform the design of the quantitative survey and help define research questions. Sequential and iterative approaches, on the other hand, require varying degrees of dialogue between the qualitative and quantitative research in all phases of the research (Rao and Woolcock 2003). In the context of energy subsidy reforms, parallel approaches are often used to combine qualitative and quantitative analysis. For example, qualitative assessments reinforce the value of collecting seasonal data in energy expenditures and can inform the design of new survey modules. Conversely, available survey data can inform qualitative research, for instance, by highlighting specific locations or categories of respondents to be targeted in FGDs or types of issues to be discussed.

In addition to capturing the social and economic impact on households in the aftermath of reforms, qualitative tools can also draw out households' experiences before the reform: actual prices paid and availability of the subsidized energy. This may allow, for instance, to distinguish the experience of groups that are heavily affected by the reform, with ones whose welfare may not be as strongly affected but who have traditionally faced a higher energy price burden. Such information can be a valuable complement to analyzing the equity implications of the reform.

Discussions with energy users can help in learning more about informal practices such as black-market trading and smuggling, which may have led to energy shortages.² In markets with poor governance, 'informal' payments might have been demanded by utility workers, especially for the initial connection to the network, thus pushing up the actual prices paid. In such circumstances, if the qualitative research is conducted after the reform, it is

important to compare households' experiences with energy prices and services and with their coping mechanisms before and after the subsidy reform. To the extent that the reform may have reduced or even eliminated energy shortages and black marketing, such information can be used to obtain a more faithful picture of the actual price changes experienced by households, as well as the supply at the unsubsidized prices.

It is equally important to understand households' experience with existing social assistance programs and institutions because these programs are often employed to mitigate negative welfare impacts of the reform. Groups such as remote rural residents, ethnic or linguistic minorities, and persons whose mobility is affected, for example, due to old age or disability, may face higher barriers to accessing social assistance programs and need alternative or additional mitigation measures. Some households may be impeded by stigma or other negative biases from accessing social assistance to cope with energy bills. Understanding these obstacles can help policy makers employ mitigation strategies that are both inclusive and socially sensitive.

Coping mechanisms after the reform include how households prioritize their spending in the face of rising energy prices, how they have coped with prior price increases or tariff adjustments, and what parts of their budgets and well-being are most affected. For example, in some contexts, qualitative studies have revealed that children's educational achievements can suffer as families reduce expenditure on lighting, preventing them from studying in the evening. Assessments in Europe and Central Asia have shown that reducing meat consumption is a widespread coping strategy, which affects health and nutrition especially of women in the household.



Families may respond to rising fuel prices by switching to lower-cost fuels that are either unsafe and/or have unwanted environmental consequences such as contributing to illegal logging, deforestation, or air pollution. These findings can guide policy makers in supporting positive coping mechanisms and preventing behaviors that have possible negative social or environmental consequences.

Qualitative research tools are commonly used to examine perceptions of citizens about the energy sector in general, and subsidy reforms in particular. The narratives that citizens attach to the reforms are instrumental to understanding sources of acceptance or resistance to the reforms, and their expectations about service quality or accountability of providers. As such the qualitative assessment is a key input to understanding the political economy environment (Good Practice Note 9) and to designing awareness-raising and communication strategies that are tailored to distinct population groups (Good Practice Note 10).

The use of qualitative research tools in energy subsidy reforms has its limitations. Unlike

national household surveys with a sampling frame to ensure representativeness, qualitative findings are not expected to be nationally or geographically representative, and they should not be used to reach generalizations. As mentioned previously, qualitative studies are often conducted before a large national survey, to inform its design and ensure that it captures issues of the highest relevance to households. If time and resource constraints do not allow a new national survey to be conducted or the relevant questions to be added to the survey, collection of qualitative data by means of FGDs and IDIs is a fast and resource-efficient way to complement available household survey data and to give a more detailed picture of households' real-life experiences before and after reforms. Qualitative findings should encompass the types and scope of issues that different categories of respondents relate to the reforms (box 1). It is important that qualitative studies capture the experiences of diverse groups of respondents, including groups that are likely to be especially vulnerable to the reform and who may be under-represented in national surveys..

BOX 1: USES FOR QUALITATIVE RESEARCH IN ENERGY PRICE SUBSIDY REFORMS

- Better understand impacts that are directly experienced and attributable to the reform, such as rising energy prices.
- Gather feedback on the types and scope of issues that different categories of citizens face.
- Understand how consumers have experienced the benefits or shortcomings of the energy sector, such as availability of the subsidized energy and the actual versus the official prices paid.
- Understand how consumers are coping with the impacts of higher energy prices and challenges that different consumer groups face to access existing support measures.
- Find out if the quality of service delivery has improved, such as reduced energy shortages, or led to smaller or no gap between official and actual prices.
- Understand citizens' level of awareness about reforms and what drives their attitudes toward reforms, to inform communication efforts.

2. TYPES OF PRICING REFORM ISSUES THAT QUALITATIVE RESEARCH CAN EXPLORE

The welfare impacts of consumer price subsidy reforms in the energy sector can vary depending on the nature of the reform, type of energy affected, social and demographic structure, and a number of other features of the country context, such as rural-urban differences in the use of energy sources, urban planning, or zoning that may affect connection to utilities, and so on. The design of qualitative research should be tailored to the country context and ensure that the interview and FGD guides cover issues that are of relevance to a diverse group of respondents, especially ones whose voice may not be represented in quantitative studies with a larger sample. This section presents some of the common types of issues that can be explored through qualitative research in the context of energy subsidy reforms.

HOUSEHOLD ENERGY USE AND SPENDING PATTERNS

The type of energy sources, and the intensity with which they are used by households for specific purposes, can vary widely across countries. Cash expenditures on energy by households are the first concern of policy makers in considering subsidy reforms, closely followed by higher expenditures on other goods and services for which energy costs are significant, such as passenger transportation and food that is transported long distances. In Europe and Central Asia, heating is likely to be the largest expenditure on energy, and its share is typically far in excess of energy shares of household expenditures in other regions where space heating is not needed. In some low- and lower-middle-income

countries, the price of kerosene for lighting is an important social welfare issue, and in countries where liquefied petroleum gas (LPG) has been historically subsidized and used widely for cooking, such as in the Middle East and North Africa, LPG subsidy reform would affect many households. Energy sources and available alternatives often vary depending on the location and political context. Seasonal spending patterns also vary according to the country, climate, type of energy source used, and/or payment collection practices used by energy providers.

As Good Practice Note 1 indicates, energy supplied through networks—electricity, natural gas, and district heating, hereafter referred to as network energy—has features that differ substantially from those of liquid fuels, and these differences have important welfare distributional effects. Delivery of targeted price subsidies is much easier with network energy than with liquid fuels because consumption is generally measured and households are billed according to consumption in a certain fixed time period, typically over a month. This enables consumption to act as a proxy for income, whereby low-consumption households are assumed to be relatively poor. By contrast, liquid fuel consumption is not monitored, and because liquid fuels are easy to store and transport, making diversion and smuggling much easier, targeted subsidies for liquid fuels have been much more challenging. LPG has a unique problem of its own—indivisibility of purchase, whereby cylinder management forces LPG to be purchased by households in fixed increments, generally ranging from 3 kg to 15 kg. At an unsubsidized unit price of



US\$1.50, for example, refilling a 10 kg cylinder would cost US\$15, a high price to pay for a daily wage earner in low- and lower-middle-income countries.

Depending on the types of energy being targeted for pricing reforms and the importance of each type in household expenditures, those planning to design qualitative research can decide to focus on a specific energy source or look at a number of energy sources used by households.

Understanding households' level of access to different types of energy sources and the purpose of their use is essential as they influence the way in which higher energy prices are experienced by households.

Differences in availability of subsidized energy, prices actually paid, the manner in which prices will be raised, energy use, and spending patterns on energy are among the key issues that are important to raise in the research guide and distinguish across groups:

- **Availability of subsidized energy.** It is not unusual for subsidized energy to be available on paper but not in practice, especially with liquid fuels. Fuel shortages from illegal diversion and smuggling restrict fuel consumption, unless households pay higher prices on the black market. In the case of network energy, outages may force households to do without the energy or turn to alternatives, such as kerosene for lighting, backup diesel generators, and wood for heating.
- **Prices actually paid by consumers.** There are various factors that could influence the price actually paid by consumers. Fuel shortages almost always push up the prices charged to consumers. Box 6 in Good Practice Note 1 cites an extreme case

of kerosene in Nigeria, where kerosene at the official subsidized price is virtually nonexistent, and consumers have been paying more than what they would have paid if the price subsidy had been eliminated.

One of the most common types of commercial malpractice is short-selling (selling less than the official amount). This is particularly problematic with LPG, where it is difficult to see what is being sold, and weighing the content can be challenging. Short-selling artificially inflates the unit price. Conversely, if the price subsidy reform is accompanied by stricter monitoring and enforcement of rules against short-selling, the actual price increase will not be as large as the official price increase. The qualitative research guide can look into this issue by asking households directly about the sources from which they purchase fuels, the volume, and price at which they are available.

In the case of network energy, prices actually paid would differ from what the tariff schedule might suggest if the utility did not meter each individual household accurately and regularly. In Sub-Saharan Africa, the practice of multiple connections to a single meter and billing households according to estimated consumption for electricity is widespread (Kojima and Trimble 2016). In Pakistan, due to short staffing, meter readers do not visit every home but rather estimate usage and make an ex post adjustment (Walker and others 2016). Practice of consumption estimation contributes to the skepticism of consumers toward their bill amounts. If network energy consumption is not metered regularly and is estimated instead, consumers from both lower- and higher-income groups may risk being overcharged if they are subject to increasing block tariffs. Because

of higher costs of metering and regular meter readings in remote areas, utilities tend to meter less and rely more on estimated consumption, making network energy consumers in remote areas especially vulnerable.³ More generally, if meters are not calibrated adequately or are broken, if meter readings are not accurately captured in the database for billing, if each consumer is not individually metered, or if there are frequent energy outages and estimated consumption does not take them into account, consumers may end up paying more than necessary, raising effective energy prices.

Informal connections by multiple households to a single meter may help poor households deal with their inability to pay the initial connection fee, but the long-term consequence is that they cannot take advantage of the lifeline rate if the government's first line of defense to protect the poor from higher utility bills is to offer a small, heavily subsidized lifeline block. This is because several poor households connected to a single meter would have larger consumption and hence appear to the utility as one 'rich' household. Households that share meters also lack control over the total consumption and bill amount, potentially making individual households less inclined to save electricity.

- **Manner of energy price increases.** The qualitative research primarily focuses on how households are affected by energy price increases as a result of consumer price subsidy reforms. To better tailor the research guide and questions, it is important for researchers to understand beforehand how energy prices increase for different groups of consumers. Price hikes can be large and infrequent, or gradual and predictable, as with diesel in India—where

the price was raised by INR 0.5 (US\$0.01) per liter every month until the price subsidy was eliminated in October 2014—and LPG in Thailand (Kojima 2016). Dealing with large price hikes is particularly challenging when prices of multiple goods and services are simultaneously raised severalfold, as in the Islamic Republic of Iran in December 2010 (Amuzegar 2011). Small, regular incremental increases are clearly easier to handle than sudden and large price shocks, and managing one price shock is more manageable than price increases of several items commonly purchased by the household. With network energy, how lifeline rates and lifeline block sizes are managed before and after the pricing reform is also important. They may be designed to make subsistence energy affordable for the poor, or even subsistence energy may become unaffordable. And even the most affordable lifeline rates may not help the poor if the utility bills are not based on accurate metering of each household. If information about price increases is not readily available, researchers may wish to prepare a short summary of key aspects of the reform to share with FGD participants before or during the discussion.

- **Different impacts on urban and rural households.** Urban and rural households, in most country contexts, are distinctly affected by subsidy reforms. The research should make sure to capture these differences as well as those across other relevant groups, for example, residents of high mountain versus valley locations, urban, peri-urban, and rural locations. Urban households in developing countries tend to purchase more energy. This is for three reasons. First, rural households are generally poorer than urban households and have less cash available to purchase energy. Second,



energy supplies do not reach many rural areas. Examples include the absence of grid electricity, LPG outlets, natural gas pipelines, and district heating. Third, rural households have greater access to freely collected biomass, such as wood and agricultural residues that can be used for cooking and heating, reducing cash expenditure on energy. Where network energy is provided, both the availability and uptake rates are higher in urban than in rural areas. Among those using electricity, consumption by rural households could be lower due to possession of fewer appliances. Where electricity is used for cooling purposes and consumption peaks during the summer months, rural households may be less affected and can employ more diverse coping strategies, thereby avoiding the need for electric cooling. One exception is unplanned urban settlements where, on account of their informal nature, network energy may not be provided.

Household expenditure surveys generally show that rural households spend smaller shares of their total expenditures on purchased energy. However, a greater portion of their ‘total’ expenditures is so-called own consumption or imputed expenditures for home-grown food and other freely acquired goods, limiting the availability of cash. Rural residents are more likely to be cash-poor or lack diverse opportunities for alternative incomes and hence may be less able than their urban counterparts to cope with higher energy prices to the extent that they purchase energy. Moreover, prices of solid fuels may rise (or availability of free traditional biomass used for energy may fall) concurrently as a result of the pricing reform, as higher energy prices increase demand for solid fuels. Where possible, mitigation measures

should also consider addressing the safety and health risks faced by households that use solid fuels or that may switch to the traditional use of solid fuels as a result of fuel or network energy price increases. Health impacts due to indoor air pollution are particularly harmful for household members spending longer times at home, usually women and children and the elderly (Good Practice Note 8).

- **Impact of energy service quality on livelihoods.** Depending on the purposes for which energy is used at the household level, different welfare impacts may be experienced. In Pakistan, price subsidies for electricity have contributed to poor financial sector viability and inadequate service delivery. In recent years, Pakistani consumers have faced 8–10 hours of daily power outages (see box 2). Long hours of power outages can reduce incomes of occupational groups, such as small shop owners and women engaged in home-based businesses. Unreliable service could place an additional financial burden on families for purchasing alternative energy sources. Small-scale or subsistence farmers using electricity to pump water for irrigation may risk losing an important source of income and the country may even face food insecurity. Fuel shortages can disrupt transportation services—flights have been known to be canceled for lack of automotive fuel used in transporting aviation fuel to airports in Nigeria—and compound power outages if there is a shortage of diesel used in backup generation. LPG shortages would adversely affect women selling food cooked using LPG. Fuel shortages are almost always accompanied by higher fuel prices, amplifying the adverse effects of low service quality.

BOX 2: PAKISTAN—IMPACTS OF ROUTINE POWER OUTAGES

Qualitative assessment conducted in Pakistan illustrates the challenging situation of Pakistani electricity consumers as long hours of routine power outages or ‘load shedding’ (8–10 hours daily) disrupted households’ income-generating activities, causing them to struggle with rising utility bills. The most common concern cited was not the cost of electricity but rather the reliability of the service.

Long hours of load shedding have had adverse impacts on the economic, physical, and social well-being of citizens. Respondents from various occupation groups, such as shop owners, factory workers, and tailors, mentioned that due to load shedding, their income levels had dropped.

Most of the residential consumers were unable to use water pumps to get water, children could not study in the evening due to the lack of lighting, and the inability to operate fans and coolers meant that they could not get regular sleep during the summer. Women were particularly affected by load shedding—nearly all women participants stated that due to long and unpredictable hours of load shedding, they could not use appliances, such as washing machines, irons, vacuum cleaners, and electric cooking appliances. Instead, women performed household chores manually, which increased their workload. Female respondents also mentioned that income-generating opportunities, such as stitching, embroidery, and housekeeping, were negatively affected by the unreliable electricity service.

Source: Walker and others 2016.

- ### • Influence of presence of informal and shared connections on energy subsidy reforms policy decisions.

Multiple connections to a single meter arise because households are individually unable to pay the initial connection fee. Multiple connections deny such households the benefits of lifeline rates and strengthening social protection through more targeted lifeline rates does not help the poor if they are multiply connected. On the one hand, multiple connections mean that limited financial resources can be pooled to enable connection to the grid. Also, if one household cannot pay one month, others may compensate to avoid disconnection, assuming their eventual reimbursement. On the other hand, if the officially registered household fails to pay—for whatever reason—everyone could be disconnected, including those who have been paying promptly and fully. And the difficulty of determining who consumed how much may create a free-rider problem, whereby some households pay less than they should at the expense of others.

In contrast to multiple connections to a single meter, the entire consumption of which is billed, households may avoid paying utilities altogether by resorting to illegal connections where there is a higher level of informality, distrust of official bill amounts, and perceived lack of accountability in the energy sector. Illegal connections for vulnerable households may be provided by intermediaries who tap into main power lines. Such arrangements undermine the financial sustainability of the utility, yet may be convenient or the only affordable option to a household, which pays small fixed amounts for the illegal connections and is at a lower risk of disconnection. In Pakistan, interviewed households mentioned resorting to illegal connections when they could no longer cope with increasing electricity costs. Despite the sensitivity of the topic, some respondents among *katchi abadi* (slum) residents and beneficiaries of cash transfers in Sindh and Punjab provinces mentioned having illegal electricity connections (what is referred to as the *kunda* system). Users of the *kunda*



system pay a small amount to the linemen⁴ every month to prevent them from cutting their illegal connection. Some respondents mentioned that they started using the *kunda* system after their electricity was disconnected due to nonpayment of bills.

- **Effects of seasonality of energy use and expenses on affordability.** Depending on the region of the world, household energy expenditures may fluctuate markedly throughout the year, and high expenditures on energy can be concentrated in a few months of the year. Seasonal peaks in energy consumption differ based on climate and/or the main energy sources used by households. Many rural households in Europe and Central Asia use wood for heating and cooking in the winter months. They purchase the wood in bulk in late summer or early autumn when it is available at the most economical price. Failure to purchase bulk wood in that time of year may mean either face wood shortages or having to pay much higher prices during the winter. Households often plan their expenses (including timing of remittances) to allow for such purchases. For urban residents who rely on utility power or gas suppliers, heating costs in the winter or cooling costs in the summer may cause expenditure hikes that should also be managed within the household budget. This seasonality should be taken into account when social assistance policies and utility policies toward debt and bill payments are structured. Understanding seasonality could also reveal inefficiencies in the consumption-based targeting of energy price subsidies. Due to the seasonality of energy expenses, low-income households could bear higher energy costs in particular months, which could distort the functioning of subsidies and expose households to higher per-unit costs (Walker and others 2016).

- **Existing options to access alternatives energy sources (and the pros and cons of doing so).** In some cases, households may resort to alternative energy sources that are unsafe, for example, wood or burning stoves in apartment buildings without proper ventilation. Reverting from LPG to traditional biomass for cooking in response to higher LPG prices could and often does have serious health effects due to indoor air pollution. As discussed in detail in Good Practice Note 8, women disproportionately bear the health burdens associated with traditional use of solid fuels (WHO 2016). Women and children spend more time in proximity to polluting combustion sources, and therefore, they are at particularly high risk of premature mortality and increased morbidity, including respiratory infections, from exposure to household air pollution (Ekouevi and Tuntivate 2012). In addition to adverse health effects, women also face risks of injury such as burns and sometimes death from kerosene stove fires. As women often collect fuel such as firewood and charcoal on their backs, they experience physical impacts, especially pregnant women (Mahat 2011). The time spent collecting cooking fuel reduces time available for childcare and productive activities by adults and for study by children. In Benin, girls spend more than 30 hours per week gathering wood (and water) for use on inefficient cookstoves (WHO 2016). However, when households switched over to clean fuels, this time was reduced by more than half. Women and girls can also be vulnerable to gender-based violence due to their roles in fuel collection, as they might have to travel to areas further from their homes. In Chad, 42 percent of households reported incidents of gender-based violence during firewood collection over a six-month span (Global Alliance for Clean Cookstoves 2016).

Table 1 illustrates potential differences in household energy use.

TABLE 1: Potential Differences in Household Energy Access, Use, and Spending per Type of Energy Source

| | Urban | Rural | Significance for households | Service quality and other challenges | Alternative energy sources | Seasonality |
|--|--|--|--|--|---|--|
| Automotive fuels (gasoline, diesel) | More commonly used than in rural areas. | Less used because fewer households have private automotive vehicles. | Primarily for better-off households. Diesel use rarer. | Fuel shortages and black market prices. | None | Automotive use may rise during holidays. |
| Kerosene | Kerosene for cooking may be more common than in rural areas in low- and lower-middle-income countries. Kerosene for lighting if grid electricity is not available and the household cannot afford captive power generation. Kerosene for space heating if neither natural gas nor district heating is available, kerosene is cheaper than electricity or LPG, and the household does not want to use a solid fuel. | Kerosene for cooking may be more common than in urban areas if there is natural gas in urban areas. Kerosene may be used for space heating by the well-off in low- and lower-middle-income countries. | Subsidized kerosene for lighting helps the poor meet basic energy needs. For cooking and heating, kerosene is not the top choice—electricity or a gaseous fuel is universally preferred if they are available and affordable (except where district heating is available for space heating). | Fuel shortages and black market prices. | Candles, solar lanterns, and batteries for lighting; biomass and charcoal as affordable alternatives for cooking; wood and coal as affordable alternatives for heating; LPG, natural gas, and electricity if they are accessible and the household can afford them. | Limited for lighting and cooking; increased consumption in winter for heating. |
| LPG | Greater availability and supply reliability than in rural areas. Used for cooking if natural gas is not available and gas is preferred to electricity for cooking. LPG for space heating if neither natural gas nor district heating is available, and electricity is more expensive or unreliable. | Limited supply. LPG for lighting among the better-off in areas with no grid electricity. LPG for cooking by those who prefer a gaseous fuel and can afford it, because natural gas is seldom available in rural areas. | Primarily used for cooking and heating water in most countries. May be used for lighting and powering appliances (such as refrigerators) where there is no grid electricity. Used for space heating in some countries. | Fuel shortages and black market prices. Underfilling of LPG cylinders by sellers resulting in overcharging of prices. Lack of reliability of supply (for timely cylinder refills). | For cooking, kerosene, biomass, and charcoal as cheaper alternatives and electricity for the better-off; kerosene, coal, biomass, and electricity for heating; natural gas if it is available; biogas | Limited for lighting and cooking; increased consumption in winter for heating |
| Natural Gas | Available largely in urban areas; Used for heating and cooking | Not available except in some countries in Europe and Central Asia | Important for heating; First choice for cooking by those who prefer a gaseous fuel to electricity | Shortages and poor reliability; Lack of individual, accurate, and/or regular metering, and associated billing deficiencies | Electricity, LPG, biomass, biogas, kerosene | Increased consumption during heating season |



| | Urban | Rural | Significance for households | Service quality and other challenges | Alternative energy sources | Seasonality |
|---------------------------------------|---|--|--|--|---|---|
| Grid electricity | High connection rates; Large areas with high or medium availability | Low availability and low connection rates in most low-income countries, especially in Sub-Saharan Africa | Crucial for lighting; Some usages (such as powering mobile phones) increasingly important even among the poor | Power blackouts and brownouts; Lack of individual, accurate, and/or regular metering, and associated billing deficiencies; Poor customer service | Kerosene and candles for lighting; LPG; batteries; gasoline and diesel used in backup power generation | Seasonal if used for cooling or heating |
| Self-generation of electricity | Backup power generation more common than in rural areas. In East Africa, better-off consumers use solar home systems as backup for unreliable grid service. | Solar home systems and solar lanterns, especially where extending the grid is expensive, although application is limited | Backup power generation to address poor reliability of grid electricity; Solar lanterns for lighting and powering mobile phones among the poor | Gasoline and diesel shortages and black market prices; High prices of solar home systems; Lack of post-sale services in rural areas | Grid electricity, kerosene, LPG | Seasonal if used for cooling or heating |
| District heating | Central heating network prominent in urban areas, particularly in countries in Europe and Central Asia | Less common in rural areas. | Heating. | Lack of individual, accurate, and/or regular metering, and associated billing deficiencies; Consumers may lack the ability to control usage. | Households do not have the option of cancelling subscription or not signing up in the first place (entailing high up-front costs) | Increased consumption during the heating season |

COPING MECHANISMS

Qualitative assessments should find out about coping mechanisms both at the time of research and after the subsidy reform. Coping mechanisms refer to the strategies and behaviors that households adopt to adapt to higher energy costs. Most commonly, households' coping strategies involve reducing energy consumption, reducing expenditure on other needs to pay for energy, switching to alternative cheaper sources of energy, or some combination of these. Understanding coping mechanisms is important as it provides a more accurate picture of the potential effect

of reforms on people's well-being and gives an insight into their likely behaviors. Policy makers can use this information to try and limit or counteract negative coping strategies (for example, ones that have a detrimental impact on health and/or the environment) and promote positive coping mechanisms (for example, support to invest in energy efficiency measures instead of drastically cutting energy use).

Everything else being equal, higher energy prices will affect households in two ways: directly through household expenditures on energy and indirectly through higher prices of

goods and services that consume the energy, the price of which has just gone up. A recent analysis of the effects of higher gasoline, kerosene, diesel, LPG, and electricity prices showed that indirect effects on households were as large as direct effects in the different regions of the world (Coady, Flamini, and Sears 2015).

Europe and Central Asia present a special case that merits a dedicated discussion, because of the disproportionately high expenditure shares of energy for heating in total household expenditures. Unlike other uses of energy, heating may be essential for survival, and higher heating bills force households to resort to coping measures that affect their basic needs and well-being. High energy costs can push poor as well as middle-income households to cut spending on food and child and/or health care, save on clothing or transportation, cut into their personal time, and increase workload (for example, from reducing use of household appliances), among other impacts (see box 3).

Energy subsidy and tariff reforms often put more pressure on middle-income households, who tend to consume more energy for their daily needs. However, households in the

bottom 40 percent can also be significantly affected, especially when it comes to heating. In countries in South Asia, households could primarily use electricity for cooling purposes (such as fans) and they could struggle more to pay their bills during the summer months, when peak consumption of electricity occurs. Poorer households might lack the ability to cut further their already minimized spending on basic needs. These households are more likely to resort to such strategies as borrowing money, delaying payment, or using illegal connections.

Looking at such coping mechanisms helps understand the commonly cited behaviors, support measures, and social networks that households resort to and are likely to use in the event that they face rapidly increasing energy costs, and the adverse impacts, if any, of resorting to such coping strategies. Such information can help policy makers increase financial incentives and support for positive coping strategies (such as energy efficient appliances and home improvements) and mitigate against possible adverse behaviors with possible long-term negative consequences, such as severely reducing spending on food, health, or education.



BOX 3: COPING STRATEGIES USED IN EUROPE AND CENTRAL ASIA

Qualitative assessments conducted in eight countries in Europe and Central Asia (Armenia, Belarus, Bulgaria, Croatia, the Kyrgyz Republic, Romania, Tajikistan, and Turkey) found that more than 90 percent of households mentioned cutting spending on food as the primary strategy to cope with higher prices of electricity, natural gas, and district heating. Poorest groups reduced the number of meals consumed and consumed less meat, while middle-income households bought lower-quality foods and cut down on non-essential food expenditures. In countries such as Armenia, rural respondents stated that they had to reduce medical expenses by not going to hospitals. In Croatia, urban respondents mentioned not using personal cars or even public transportation but walking and biking instead to save on gasoline and transport fares. In countries in Central Asia, such as Tajikistan and the Kyrgyz Republic, respondents stated that they could not afford to attend traditional celebrations and weddings.

Source: World Bank 2015a.

Comparing coping mechanisms across gender or different socioeconomic groups is also illustrative of the effects of the subsidy across a wider spectrum of the population.

Some of the coping mechanisms that households could apply in the face of network energy subsidy and tariff changes could include the following:

- **Cutting spending on food.** Households can try to reduce food expenses as a direct consequence of higher energy costs as well as increasing prices of other consumer goods. Women are often most affected by food savings because in many countries, women are more likely to sacrifice their food consumption first (World Bank 2015c).
- **Cutting healthcare expenses by avoiding doctor visits or preferring self-treatment.** To cope with higher energy expenses, households might stop going to hospitals or health clinics and prefer traditional treatments for certain conditions. Elderly members of households, who live on smaller and fixed income and have higher and more regular medical costs, most often mention resorting to this strategy. They may choose to reduce or skip medications and doctor visits as an attempt to minimize health care expenses.
- **Cutting expenses on education, clothing, social gatherings, and traditional celebrations.** Children's educational expenses can be compromised for ensuring payment of energy bills. Households might not be able to afford tuition costs necessary for sending their children to schools that provide better-quality education. Spending on children's uniforms and pocket money might also be cut. Households can also stop attending social gatherings and traditional celebrations such as weddings due to

transportation and gift expenses, which can result in social isolation.

- **Borrowing money from relatives/friends and financial institutions.** In certain cultures, households may use borrowing money as a last-resort strategy to cope with the budget pressure from increasing energy expenses. However, the poorest households might use this strategy more frequently due to already reduced household expenses. Most often households borrow money from relatives or friends (see box 4). In certain cases, they might borrow money from financial institutions with interest, which can cause stress and impose a further financial cost in interest fees.
- **Reducing energy use in the household as much as possible.** Households most often attempt to reduce energy use to make their bills more affordable. Households can reduce energy use by heating only one room in the house, changing their bathing habits, avoiding spending time at home to save on heating expenses, and using electrical appliances less and performing certain tasks such as washing clothes manually. Extended families in cold-climate countries may choose to live together in the winter months, often in crowded conditions, to save on heating expenses.

Researching coping mechanisms can also help understand payment patterns for network energy. This information would help policy makers and utility companies design better communication strategies and programs to incentivize timely payment.

- **Delaying payments.** Although delaying payments can bring penalty fees, households often resort to it for energy services, such as electricity or gas, as a coping strategy (box 4).

- Nonpayment of bills.** Households may also stop paying bills altogether and consequently get disconnected, as a result of price hikes and inability to adjust their energy use to affordable levels or to access adequate mitigation programs. In some contexts, due to accountability issues in the energy sector, middlemen can take advantage of household vulnerabilities and provide disconnected households access to energy sources in exchange for monthly payments. Nonpayment can also be caused by specific regional characteristics. For example, in certain parts of a country, nonpayment can be more widespread due to accumulated grievances against government and energy providers. Another factor driving nonpayment behavior could be related to the limited capacity of the service provider to create, deliver, and collect bills from consumers and/or the lack of trust in bill amounts. Qualitative studies can examine nonpayment both as a coping strategy and as a way of understanding factors that affect households' willingness to pay.
- Unlike network energy, where prepaid metering is still relatively uncommon, delayed payments and nonpayment are extremely rare because full payments are expected at the time of purchase.
- The expenditure shares of liquid fuels for cooking, heating water, and lighting tend to be markedly smaller than those for heating in countries with cold climates. As a result, the extent to which households consider cutting back on other essential expenditures is correspondingly smaller.
- Gasoline and diesel fuel may be considered 'fuels of the rich' in some low- and lower-middle income countries because their use requires possession of a motorized vehicle. In such contexts, the direct effects on the poor from gasoline or diesel price hikes will be small to negligible. In other middle-income countries, however, households who are poor or vulnerable to falling into poverty also own cars and may in fact be using them for income generation. Some low- or middle-income households may rely on motorbikes for personal transportation or backup generators for electricity and will be adversely affected.
- In countries with low rates of access to electricity, many poor households may be using kerosene for lighting. While the total monthly consumption may be small (such as 5 liters or less), if higher prices

Where kerosene and LPG are used for space heating, coping mechanisms may be similar to those for network energy. In all other cases, coping with higher liquid fuel prices may be different from coping with network energy price increases for a variety of reasons:

BOX 4: MYANMAR—DELAYING PAYMENTS AND BORROWING MONEY

Qualitative assessment conducted in Myanmar revealed that the main coping strategies used by the households were late payments and borrowing money from neighbors. Households residing in rural areas (landless and poor households) mentioned occasionally resorting to late payments or to borrowing from neighbors for monthly electricity payments without interest charged. Borrowing money was often done with the idea that the favor will be reciprocated if needed.

Source: World Bank. 2015b.



make kerosene unaffordable, there could be serious adverse welfare effects on the poor.

- In some countries, kerosene may be the cooking fuel of choice among the urban poor. Cooking with kerosene is more common where kerosene is subsidized, or where kerosene is more affordable than LPG or electricity.
- LPG is unique in several aspects. It is not used if there is natural gas delivered to the household. Where there is no natural gas, LPG may be used for cooking even by the rich who prefer a gaseous fuel over electricity. Because of the indivisibility of LPG purchase—unlike kerosene, LPG cannot be purchased in any small quantity to match the wage earnings of daily laborers—LPG is not a fuel of the poor in low- and lower-middle-income countries, unless it is heavily subsidized.
- In some countries, such as Morocco, household use of LPG is nearly universal because LPG has been heavily subsidized for decades. In such countries, a sudden and large LPG price increase would have widespread repercussions.
- Where LPG is used for lighting and refrigeration, it is primarily by better-off households, although such use of LPG is limited because they tend to have access to electricity.

VULNERABILITY FACTORS: GENDER AND EXCLUDED GROUPS

Gender-specific vulnerabilities. Women are often disproportionately affected by coping mechanisms. As women are more often responsible for household chores such as cleaning, washing, and cooking, reduced use of appliances directly affects their workload

(World Bank 2015e). When women (and girls) fulfill these household tasks manually, they might experience time constraints and physical strain, leaving less time for educational and income-generating activities (Canpolat 2017). Women who stay at home are also more directly affected by savings on heating and cooling. Women are also more likely to sacrifice their needs first to manage the household budget to afford higher energy costs. Women and children often disproportionately bear the health burdens associated with reliance on traditional fuels. Because they spend more time in proximity to polluting combustion sources, women and children are at particularly high risk of respiratory infections from exposure to household air pollution (HAP) (WHO 2016). While women use energy in the household more due to their traditional roles as homemakers, they might not always participate equally in decision making on the procurement of energy sources or appliances (World Bank 2015e). Female-headed households experience particular challenges in coping with higher energy prices. Such households may have lower incomes on average due to gender wage disparities. In addition, the absence of men may isolate the household from information networks or markets that are traditionally male (see box 5).

Socially excluded groups. The World Bank has defined social inclusion as the process for improving the ability, opportunity, and dignity of people, disadvantaged on the basis of their identity, to take part in society. In every society, there are groups that due to their gender, race, caste, ethnicity, indigeneity, religion, disability status, or other factors are often excluded from the development process (World Bank, 2013). Intersecting identities can produce a multiplication of disadvantages, causing certain groups (for example, women of minority origin) to face even greater barriers

BOX 5: PARTICULAR VULNERABILITIES OF FEMALE-HEADED HOUSEHOLDS

Female-headed households could be particularly vulnerable to increasing energy prices as they are often economically disadvantaged, they have lower incomes, and they face additional barriers in pursuing income-generating opportunities. It is important to note that female-headed households do not constitute a homogenous group. The category of female-headed households could include different groups (for example, elderly women living alone, divorced women, widows, women in polygamous marriages) depending on the country context. Indirect effects of higher energy prices such as increasing prices for solid fuels could also affect female-headed households more. In some countries (such as Guatemala) female-headed households rely more on sources such as wood than male-headed households and, therefore, they would be affected more by higher prices of wood triggered by price increases of modern fuels, which are substitutes for wood. Female-headed households could also face constraints in procuring wood and coal. In countries in Europe and Central Asia, it was found that men are primarily responsible for purchasing, transporting, and storing wood or coal due to the physical effort required and reliance on male networks (for example, male forest rangers and wood traders) to fulfill these tasks. Female-headed households often have to outsource transport, storage, and preparation of heating fuels at an extra cost. Conversely, women are found to be primarily responsible for collecting fuels such as manure, brushwood, and agricultural by-products in some countries. Rural female-headed households in Tajikistan, and rural Roma women in Romania report relying on these sources, which do not have a monetary value but are time intensive to procure. Collecting these alternative sources increases women's drudgery and could negatively impact their physical well-being. In countries in Europe and Central Asia, elderly women living alone are found to be especially vulnerable given their low pensions, inability to engage in additional income-generation, and physical demands of using wood and coal for heating. Gender-disaggregated impacts of energy subsidy reforms have been more extensively researched in Europe and Central Asia, and hence more examples from this region are presented here.

Source: World Bank 2015a.

to participation in social and economic life (Canpolat and Schmidt 2015). Excluded groups are often overrepresented among the poor, are systematically disadvantaged in their access to employment and services, and have lower outcomes in terms of income, human capital endowments, and voice in national and local decision-making processes (World Bank 2013). Nevertheless, due to their small size or 'invisibility',⁵ such groups often do not gain sufficient voice, and the issues pertinent to them may not be evident through national quantitative survey. Qualitative studies are well positioned to target respondents from potentially excluded groups to understand their distinct impacts and challenges in the context of reforms and ensure that mitigation policies are designed in an inclusive manner.

The World Bank's new Environmental and Social Framework puts particular emphasis on improving access of excluded groups to affordable energy (World Bank 2017a). In the context of energy subsidy reforms, excluded groups might face direct and indirect impacts that are distinct from more mainstream population groups. The impacts of coping mechanisms that excluded groups could resort to in the face of higher energy prices could have significant consequences on their health, socioeconomic well-being, and quality of life. While there is a gap in the literature on particular impacts of subsidy reforms on various excluded groups, this note highlights how reform impacts could have particular consequences for IPs, people with disabilities, and children (see boxes 6, 7, and 8). While designing qualitative assessments



of welfare impacts of subsidy reforms, it is crucial to identify relevant excluded groups and design a research sample that can reach out to them in a culturally sensitive manner.

Spatiality is also an important dimension of exclusion. In several countries, there is often an overlap between social and spatial exclusion (Das 2016). Excluded groups could be concentrated in particular geographic areas including slums, which could have higher rates of poverty and worse development outcomes (see box 9 for slums). In the context of energy subsidy reforms, geographical areas where excluded groups predominantly live could have higher rates of under- or nonpayment for use of network energy (through theft, nonpayment of bills, meter tampering, and other forms of malpractice) in these areas, leading to large collection losses by utilities. In these situations, energy subsidy reforms might be accompanied by broader power sector reforms in which steps are taken to reduce commercial losses (whereby energy is

consumed but not fully or even partially billed) and collection losses (energy consumption is billed but bills are not paid) simultaneously. Having to pay fully in the face of higher unit prices, when previously only a fraction of consumption had been paid for, would expose these minority groups to higher expenditures on energy.

As excluded groups could often be at a higher risk of poverty, costs of formal connections and prompt bill payments could negatively affect their social and economic well-being. Another factor contributing to the vulnerability of excluded groups is the possibility that these groups might experience discrimination in accessing social assistance. Qualitative research in countries in Europe and Central Asia revealed a widespread perception among Roma minority respondents of experiencing discrimination in accessing social assistance (World Bank 2015c). In such cases, minority groups have fewer options to protect themselves against price increases.

BOX 6: INDIGENOUS PEOPLES—CHALLENGES IN ENERGY ACCESS AND AFFORDABILITY

Indigenous peoples (IPs) are often the most marginalized and vulnerable segments of the populations around the world. IPs make up around 4.5 percent of the global population; however, they constitute 10 percent of the global poor. They are at higher risk of poverty, suffer from worse development outcomes, and experience lack of access to energy services. For example, only 40 percent of indigenous populations in Panama have access to electricity, while access for the rest of the population is almost universal. In the early twenty-first century, electrification rates in Mexico reached 96 percent, while 60 percent of the 3.5 million people remaining without access were IPs, who lived in remote and isolated locations. While IPs face significant challenges in accessing energy services, indigenous territories often host large energy infrastructure investments.

There is a lack of studies looking at the impact of energy price reforms on indigenous populations. IPs may be more reliant on solid fuels (for example, wood) due to various factors including stronger attachment to traditional cooking practices. In rural Brazil and Mexico, it was found that having an indigenous head of household decreased the probability of LPG use as well as the quantity purchased. Increases in solid fuel prices due to higher prices of modern energy sources could particularly affect indigenous populations.

Sources: Indigenous Peoples Major Group for Sustainable Development. 2018; Kojima, Bacon and Zhou 2011; World Bank 2013, 2015f, 2017b.

BOX 7: PEOPLE WITH DISABILITIES AND ENERGY AFFORDABILITY

People with disabilities also have higher risk of experiencing poverty and low income, and they face significant challenges in accessing services. Households containing one or more disabled adults and/or disabled children are likely to have extra medical or caregiving costs, which could limit the amount they have available to afford essential energy expenses. In Britain, it was found that 10 percent of people with mental disorders are not able to keep their home sufficiently warm in the winter, compared to 3 percent of people without mental health problems. They were also more likely to consume less energy to reduce household expenses and more likely to fall behind in paying for gas and electricity bills and/or being disconnected.

Sources: George, Graham, and Lennard 2013.

**BOX 8: REFORM IMPACTS INSIDE THE HOUSEHOLD: SPECIFIC IMPACTS ON CHILDREN**

Children could be particularly affected by the coping mechanisms that households resort to in the face of higher energy costs. In Pakistan, low-income families reported sending their children to public schools and economizing on school uniform and equipment as a coping mechanism. In Armenia, rural and urban households also reported that they cut spending on children's education and daycare as a way to afford rising costs of energy and other basic needs. Reducing lighting in the home can also affect children's ability to study in the evening.

Living in a cold home could also negatively affect infants' and children's development and can increase children's vulnerability to respiratory problems. As they spend more calories to keep warm, infants and children spend fewer calories for growth and building a healthy immune system. Cutting household expenses on food—also referred to as 'heat or eat pressure'—could affect children's nutrition and immune systems. Switching to solid fuel use due to increasing prices of modern energy sources could particularly affect children. According to the WHO, the single biggest killer of children under five worldwide is pneumonia and more than 50 percent of those pneumonia deaths are caused by exposure to HAP, which is caused by use of inefficient and polluting traditional fuels.

Sources: George, Graham, and Lennard 2013; Walker and others 2016; WHO 2016; World Bank 2015a.

BOX 9: GEOGRAPHICAL EXCLUSION: THE CASE OF SLUMS

More than 880 million urban residents in developing countries live in slums. These informal settlements are often located on the periphery of cities, in socially and economically isolated areas. They often have poor housing conditions and lack access to basic services including networked energy services. Increasing energy costs could have significant impacts on slum residents. For instance, in Pakistan, katchi abadi (slum) residents reported that they face increasing pressure of coping with the higher electricity costs and low reliability of electricity on family life, health, education, and economic activities. Pakistani slum residents reported applying coping mechanisms such as cutting the number of meals consumed; eating chutney, onions, and roti (flat bread); and cutting out meat and other proteins. However, slum residents also mentioned that they could not further cut their already minimized spending on basic needs such as food. Slum residents may resort to illegal electricity connections because they cannot afford connection fees or cannot afford to pay their bills and may also fall outside urban zones that can be connected to the power grid.

Sources: World Bank 2013; Walker and others 2016.

STABILITY OF INCOMES AND COPING MECHANISMS

When analyzing the welfare impact of reforms, researchers should take into account the fact that household incomes and, correspondingly, their ability to afford energy are not static. Incomes may fluctuate significantly depending on the season or may depend on factors such as receiving remittances, a good agricultural crop, and so on. Qualitative research allows a better understanding of the way in which the diversity and stability of households' income sources affect their ability to cope with energy expenses. This can indicate possible risks of no longer being able to purchase fuels, and especially LPG, defaulting on utility payments, or entering into debt with utilities or financial institutions, falling into poverty or, in Europe and Central Asia with significant heating demand, severely undermining spending on basic needs such as nutrition, education, and health.

Across the world, many low-income households rely on temporary, seasonal, or informal income sources. However, energy costs are recurring. Thus, households with unstable incomes tend to perceive the welfare impacts of energy price reforms to be higher because of the risk associated with continuous affordability. Households in which the main breadwinner is unemployed, works seasonally, or has migrated can find it harder to cope with increasing prices. Disadvantaged groups, such as ethnic minorities, slum-dwellers, or other populations that rely exclusively on informal jobs, are also more likely to have insecure incomes and might struggle more with increasing energy prices. Similarly, the price of energy may have an influence on

households' future decisions whether to continue or start a business or other income-generating activity. Qualitative studies allow to explore these factors as well as a way of understanding overall vulnerability to reforms.

AVAILABLE ALTERNATIVES AND ISSUES RELATED TO ACCESS TO AND COST OF THESE ALTERNATIVES

As end-user costs of some energy sources rise, in addition to cutting back on non-energy expenditures, households are also likely to seek alternatives. These alternatives were presumably deemed less desirable by households before the price subsidy reform but now look attractive because of their lower overall costs. Relative prices and availability of different forms of energy that are substitutes could also change during the reform. The question is what alternatives are available. Those who cannot afford higher energy prices may seek inferior forms of energy as alternatives, such as candles and solid fuels, which are more inconvenient and have negative health impacts, as discussed earlier.

While households that switch to cheaper energy sources, such as wood or manure, can experience negative impacts, households that are not able to switch to cheaper alternatives face higher energy costs and can be negatively affected by increasing energy prices. Price increases in electricity, natural gas, or LPG can also drive up the prices of alternative energy sources. Certain groups, such as low-income households that cannot afford alternative sources due to increasing costs, can be more vulnerable to energy subsidy reforms (see box 10).

BOX 10: CROATIA—DISTRICT HEATING USERS AND INABILITY TO SWITCH TO ALTERNATIVE ENERGY SOURCES

Qualitative study pointed to particular vulnerabilities of poor district heating users, since they are unable to control heating consumption and cannot switch to an alternative energy source (World Bank 2015a). It was found that these households also cannot afford the up-front cost of individual meter installation, which could allow them to control their consumption of heat. Qualitative research recommended that poor district heating users should be provided with assistance for individual meter installation.

Source: World Bank 2015a.

HOUSEHOLD EXPERIENCES WITH AND ATTITUDES TO ENERGY EFFICIENCY IMPROVEMENT

Energy efficiency measures are essential for mitigating the long-term negative welfare impacts of higher energy prices from subsidy reforms. Using more efficient appliances or improving the insulation of homes can reduce household energy expenses while continuing to meet the basic needs of the households. However, while energy efficiency leads to savings in the long term, adopting energy efficiency measures could come with a high upfront cost, depending on the country context. Qualitative research can reveal households' incentives, experiences with, and attitudes toward adopting energy efficiency measures. This knowledge can improve the targeting of support programs for energy efficiency improvement and awareness raising to expand their benefits to a broader segment of the population.

- **Perceptions of energy efficiency and willingness to adopt such measures.**

Households could perceive energy efficiency improvement measures positively, and researchers might find that many households have already adopted or are thinking of improving such measures as purchasing more efficient light bulbs, home insulation, and ventilation techniques

commensurate with their knowledge and income. Attitudes toward energy efficiency are affected by existing information networks. Sometimes those networks may exclude potential champions for energy efficiency improvement within communities, such as women, in addition to spreading information predominantly among technical, engineering, or traditionally male circles. Researchers may also find prevalent misinformation about energy efficiency that can be corrected with better public information campaigns.

- **Obstacles to adopting energy efficiency.**

Despite awareness about energy efficiency improvement measures, low-income households might lack the financial means to invest in such measures due to the high upfront costs of such investments. Qualitative research should explore the specific barriers (such as financial, administrative, and informational) that different groups face to adopt energy efficiency improvement measures and recommend remedial actions that can have the highest impact in the local context.



HOUSEHOLDS' KNOWLEDGE OF AND ACCESS TO SUPPORT MEASURES

Social assistance is an essential mechanism through which governments can mitigate the negative impacts of energy subsidy reforms for the poor. Existing social protection programs can be leveraged to cushion the impacts of energy price subsidy reforms through provisional measures, with wider coverage, in the short or medium term, and sustainable social protection programs, targeted to the poor, in the long term (see Good Practice Note 5 on compensatory social safety net measures).

Qualitative research tools can help teams highlight areas where existing social protection programs can be strengthened to protect the spending of vulnerable groups to meet their basic needs, including energy, based on respondents' comments. These tools can also explore whether social protection programs of last resort that are available are equipped to offset the negative impacts of reforms, and to assess constraints on certain vulnerable groups to access social assistance measures. FGDs with households that are eligible for social assistance at the time of research can reveal some common obstacles to accessing these programs, such as a complex application process or eligibility criteria, the need to choose between opportunities for informal income and access to social assistance, social stigma, or other factors that may prevent them from using these benefits. IDIs with social assistance experts can also provide insights into barriers to access and/or the adequacy of support mechanisms to offset adverse impacts of energy price subsidy reforms on the poor. Policy makers can use this information to ensure that the social protection mechanisms that are employed

to mitigate welfare impacts are inclusive and accessible.

Qualitative assessment tools are particularly well positioned to assess the following:

- **Citizens' perceptions of social safety net programs in mitigating negative impacts of energy price subsidy reforms.** Households might be skeptical that social safety nets can help them cope with higher energy costs. Reasons for such skepticism might relate to restrictive eligibility requirements, complex application procedures, a lack of trust in social assistance institutions, and/or difficult access to or poor capacity of social workers who could facilitate access to such programs.
- **Households' awareness of and trust in relevant support programs, eligibility criteria, or application process.** Households may lack awareness of eligibility criteria or struggle to understand the eligibility requirements and application processes for social assistance. In countries where social safety net programs have low coverage or weak systems for controlling fraud—with resulting leakage of benefits to wealthier households—poor, marginalized, or spatially isolated communities may not consider social safety nets as a viable source of support.
- **Social stigma associated with being a social safety net recipient.** Negative feelings associated with receiving social assistance can influence households' willingness to seek such support, even if as a temporary measure. In some countries, it might be considered “shameful” to receive social assistance and therefore, households that do not currently benefit from social safety nets might not see it as an acceptable way to relieve the burden

of increasing energy costs (see box 6). In certain contexts (such as in the examples for the Kyrgyz Republic), men may face greater obstacles in seeking social assistance due to the prevalent stereotypes of men as earners and breadwinners. Strengthening the administrative system for determining eligibility can reduce the discretion of social works and hence hidden bias that may affect access.

- **Household preferences for the timing and method of distribution of social assistance benefits.** Households can often prefer social benefits to be aligned with seasonal energy consumption patterns. For instance, in Europe and Central Asia, households in small towns or rural areas that use wood for heating in the winter may prefer to receive heating benefits in late summer when wood can be purchased in bulk and at a cheaper price rather than receiving a monthly benefit throughout the winter.
- **Flexibility of social assistance measures.** Qualitative findings can also help highlight areas where flexibility of social assistance measures can improve their benefits to vulnerable energy users. Social assistance measures can effectively mitigate the negative welfare impacts of higher prices when they reflect the seasonality of energy cost burdens. Eligibility requirements may

need to consider gender issues, such as women being able to register as applicants in the absence of a male relative, even if they are not formal owners of any household property.

- **Households' preferred assistance mechanisms and perceived obstacles with accessing such mechanisms.** It is important to understand which mechanisms households perceive as the most effective way to help them with the welfare impacts of energy subsidy reforms, as well as the specific obstacles they may face in accessing support mechanisms.
- **Applicability of assistance to different energy sources.** Whether assistance measures are applicable to different energy sources is important to understand if such measures can help a wide range of households that rely on different energy sources.
- **Adequacy and equity of social assistance.** If in a given country there are differences in energy prices across regions of the country, or if climate conditions require greater use of heating or cooling in certain parts of the country, it can be important to explore whether national social assistance programs are equally effective for diverse types of consumers. For example, a cash benefit



BOX 11: BELARUS—SOCIAL STIGMA ASSOCIATED WITH RECEIVING SOCIAL ASSISTANCE

Qualitative assessment conducted in Belarus revealed the existence of a prevalent belief among the population that income-based social assistance is stigmatized (as being received by 'drug addicts' or 'alcoholics') and thus not readily perceived as a coping mechanism for energy pricing reforms that would have repercussions on a much larger segment of the population. In such contexts low-income households, who have previously not accessed social assistance, may need substantial awareness-raising efforts to accept and use social protection benefits as a solution for energy affordability.

Source: World Bank 2015a.

BOX 12: ROMA POPULATION IN BULGARIA AND ROMANIA—INFORMAL INCOMES AND PERCEIVED DISCRIMINATION IN ACCESSING SOCIAL ASSISTANCE

In qualitative studies conducted in Bulgaria and Romania, the Roma population was found to face greater difficulties in coping with energy expenses. Roma respondents reported spending a larger share of their income on energy expenses, and they often have informal and insecure sources of income. Moreover, there exists a widespread perception among Roma respondents of experiencing discrimination in accessing social assistance. Qualitative research recommended that measures to support energy affordability should be sensitive to the distinct needs of Roma populations.

Source: World Bank 2015a.

geared at supporting heating expenses in Tajikistan may cover the majority of heating costs for a household living in a valley but only a fraction of heating costs of those living in mountainous areas due to both the length of the heating season and price and availability of energy sources across their locations.

- **Informality and bureaucratic barriers.** The most vulnerable groups of consumers can often be informal workers or families of seasonal migrants (see box 7). Therefore, it is important to examine whether social assistance can ensure protection to those who are made ineligible for support without compromising its integrity. Internally displaced citizens in Ukraine have pointed to the complex system of household subsidy eligibility. As apartment tenants, they are responsible for covering utility bills, although only legal residents and owners with proper address registrations are eligible to receive a household subsidy. Changing

address registrations involves cumbersome bureaucratic steps for both tenants and landlords. The same issue affects a broader spectrum of tenants, for example, students moving to larger cities for education. In such cases, the effectiveness of social assistance depends on simplifying registration across a range of other institutions (such as residency registration) and aligning the incentives for owners and tenants.

Qualitative studies that have been conducted to understand impacts of higher energy prices have also looked at issues, such as experiences with and perceptions of energy sector institutions, and consumer awareness of and attitudes toward energy sector reforms. These issues are crucial to understanding the public acceptability of reforms. For more information about how qualitative research tools can help identify political economy constraints to reforms, see Good Practice Note 9 on political economy and Good Practice Note 10 on communications.

3. DESIGNING QUALITATIVE RESEARCH

Those planning to design qualitative research can consider the issues discussed above, including household energy use and spending patterns, coping mechanisms, available alternative energy sources and issues related to access to these alternatives, and available support mechanisms and households' knowledge and access to them to formulate research questions.

ADAPTING TO CONTEXT

Before designing qualitative research, it is important to find out whether any quantitative research has previously been conducted or will be conducted. Qualitative research findings can help improve the design of quantitative surveys. If qualitative research will be implemented in tandem with quantitative assessment, the two groups of researchers should develop an integrated methodology. They should discuss whether these assessments will have the same focus or whether they want to focus on particular sets of issues under each research methodology. While this note focuses on understanding welfare impacts, a qualitative assessment commissioned in-country can also be used to explore public attitudes toward the reform or energy sector institutions in general which may be important to understand the political economy environment and possible drivers of opposition to reforms. The use of qualitative research tools in understanding public attitudes toward energy subsidy reforms is examined in Good Practice Note 9 on political economy analysis, which can be integrated in the design of qualitative research.

Researchers should consider the factors above as well as any additional issues surrounding the reform agenda and its distributional impacts, to tailor the sample of respondents and research questions to the country context. Before designing qualitative research, it would be useful to ask the following questions:

- What do we know about the context? Are there specific social groups that are more likely to be vulnerable to higher energy prices? Are there geographic areas that are more vulnerable?

Answers to such questions can help determine the location(s) for the qualitative assessment, particular social groups on which to focus, and whether there is a need to include a sample from specific social groups that may be alternatively affected by the price subsidy reform.

- What do we know about the proposed or ongoing changes to energy pricing? Is this a one-off policy change or one in a series of reform steps? Are there other steps being taken that could increase household expenditures on energy, such as efforts to reduce commercial and bill collection losses, or conversely reduce the price increase, such as stricter enforcement of rules against short-selling? Have analyses been conducted on previous pricing reforms, and if so, what have the impacts been? Are there perception surveys on previous reforms on which analyses can be built? Do reforms affect specific groups of consumers? What is the state of the policy dialogue?

Answers to such questions can help further determine the sample for focus groups



BOX 13: CONTEXTUAL FACTORS TO CONSIDER IN DESIGNING QUALITATIVE RESEARCH

- Types of energy subsidies being reformed
- Prices actually paid and differences from official prices
 - Network energy—individually metered
 - Network energy—multiple connections
 - Network energy—unmetered
 - Liquid fuels
- Availability or shortages of subsidized energy
 - Network energy
 - Liquid fuels
 - Special case of LPG
- Consumption level and purpose
 - Network energy
 - Liquid fuels
- Determinants of availability, price, and consumption
 - Household income
 - Location: urban/rural, distance to major supply centers, consumer and consumption density, infrastructure availability, climate
 - Extent of commercial malpractice (black marketing, smuggling, stolen network energy)
 - Individually metered, unmetered, multiple connections
 - Type of housing: single family or multi-dwelling units, type of insulation, age of building
- Social and demographic trends (such as high rates of migration, high share of elderly/pensioners, high shares of women-headed households, and so on)
- Geographical factors (stark differences in energy use or price between mountain and valley, coastline or inland, other regional or subnational variation in energy prices)
- Vulnerable and excluded groups (such as indigenous populations, ethnic minorities, and so on)
- Rate of expected price or tariff increase of different energy sources

or individual interviews, identify valuable existing information on reform impacts, and tailor questions. Understanding the state of the policy dialogue can help focus the analysis on potential impacts, mitigation measures, or social accountability and communications.

- What are the available resources? Are research groups with adequate experience carrying out the research in the country?

How much support will they need? What is the available funding for this analysis?

Answers to such questions can help determine the overall scope of the analysis, whether there is a need to focus the scope on a narrower set of questions or to design the research so that it includes capacity building for the selected local firms implementing the assessment.

SAMPLE SELECTION

The sample in qualitative research should aim to represent a diverse range of respondents to provide information on variety of experiences with energy price subsidy reforms. Qualitative research to understand the impacts of price subsidy reforms should follow a purposive sampling. Specific subgroups should be identified according to various factors, such as household income level, geographic location, and energy source use, which can result in differences in impacts experienced by households. In particular, the following groups could be included in the sample to capture a wide array of distributional impacts of energy subsidy reforms:

- Rural and urban respondents
- Representatives of different geographic areas (different climatic or development zones)
- Groups using different sources of energy
- Beneficiaries and non-beneficiaries of social assistance, heating benefits, and any other targeted energy assistance provisions
- Employed and unemployed or underemployed
- Low- and middle-income households
- Men and women
- Historically disadvantaged or minority groups that could face different impacts, have different perspectives on the reforms, or have different relationships with energy sector providers or social assistance institutions.

To be able to compare and contrast the experience of different population groups it is recommended that separate FGDs are

conducted with the key groups of interest (for example, urban and rural, men and women, mountain and valley, users of network energy and users of other fuels) This is also important, to ensure openness of discussion. Participants in FGDs will be more likely to engage and share examples if others in the group face similar issues, for example, use the same energy sources. In some contexts, separate discussions with men and women are recommended for cultural reasons; even in countries where mixed-gender discussions are common, conducting FGDs with men and women separately can allow to distill the specific issues of relevance to women and women-headed households.

FOCUS GROUP DISCUSSIONS

FGDs aim to capture a range of views and experiences of households from different backgrounds. They seek to capture community-level information and reveal variations across households. FGDs are useful to collect data that can be elicited through interaction with others in debating issues and exchanging views (Chandler and others 2008). FGDs are not well suited to gather specific individual information regarding spending on energy sources or issues that can be considered as sensitive by households, such as nonpayment. However, in certain cases, if nonpayment is widespread in a given community, respondents might open up about the issue of informal connections. Each FGD usually brings 7–12 participants together for an hour or so to discuss a specific topic (Myers 2009). It is important to keep sufficient homogeneity in each FGD to make participants feel comfortable to express their views and foster participation and allow for open and meaningful discussion.

Researchers can consider conducting separate focus groups with groups based on their



income level, geographic location, gender, and social assistance recipient status. FGDs are guided by a moderator who directs the enquiry and the interaction among respondents (Myers 2009). The moderator moves the discussion toward identifying points of contention, group norms, and potential issues for further analysis (Chandler and others 2008). Although, FGDs strive to provide a 'collective narrative' on a subject, consensus is not the goal of a focus group (Myers 2009). FGDs should take into account diversion from collective narratives and go beyond group consensus and capture narratives that might differ from the agreed narrative by most of the participants as it can provide interesting insights (Rao and Woolcock 2003). The quality of the FDG strongly depends on the quality of the moderator (Rao and Woolcock 2003). FGD moderators should encourage participants to express their points of view in an atmosphere of mutual respect and should facilitate interaction among the participants (Myers 2009).

Before conducting FGDs, research teams should prepare an FGD guide, which could provide a useful roadmap for FGD moderators. Part A of the annex provides a sample FGD guide used in Europe and Central Asia that can be tailored according to a particular country and reform context.

ETHNOGRAPHIC INTERVIEWS OR IN-DEPTH INTERVIEWS WITH HOUSEHOLDS

Ethnographic interviews or semi-structured IDs with households can be used to extract more specific information about households' energy costs or the ways in which they experience the impacts of tariff reforms. Semi-structured interviews include some questions,

but the interviewer is not expected to strictly follow them (Myers 2009). The interviewer should listen, prompt, and encourage the interviewee and ensure that the interviewee is comfortable (Myers 2009). The interviewer should be open to the possibility of new questions emerging and is encouraged to improvise during the interview (Myers 2009). Despite having flexibility to allow for improvisation, semi-structured interviews strive to have a consistency across interviews, and the interviewer is expected to start with a similar set of questions in each interview (Myers 2009). In ethnographic interviews, sensitive issues such as nonpayment or illegal energy use can also be explored. Overall, ethnographic interviews in qualitative assessments have been used to provide more specific, in-depth information about households' day-to-day energy use patterns and coping mechanisms.

Respondents in ethnographic interviews can be chosen to represent typical but different household situations. Common criteria for selecting them may be whether they

- Live in an urban, small town, or rural location;
- Use different energy sources for various purposes (for example, grid electricity, kerosene, LPG, solar lamps, solar panels, or diesel generators for lighting and district heating, wood or coal, electricity, or gas for heating);
- Are apartment dwellers or live in single-family housing units (relevant in the case of higher heating bills);
- Are poor or low-income households, or middle-income (not exceptional in terms of their vulnerability); and/or
- Have children or elderly members.

Part B of the annex provides some examples of questions in ethnographic interviews, focusing primarily on network energy.

IN-DEPTH INTERVIEWS WITH KEY EXPERTS

A key-informant IDI is an extended one-on-one exchange with someone who is an expert in areas that are relevant to the energy subsidy reforms. Key-informant interviews can validate, explain, and balance opinions expressed by households and energy consumers. They serve to provide a broader picture by gathering information from stakeholders on topics of their expertise, such as social assistance programs, electricity or heating distribution,

consumer rights protection, and gender-related vulnerabilities.

Key-informant IDI respondents include representatives of institutions that are professionally involved in any of the aspects discussed in the FGDs. These can include

- Social assistance workers and administrators,
- Energy company representatives,
- Local government,
- Civil society, and
- Community leaders.

Part B of the annex provides a sample key-informant interview guide.

4. CONDUCTING THE RESEARCH

The time frame for qualitative assessments varies depending on availability and the research team's capacity or training needs, the availability of respondents, and the geographical size of the area to be covered in the sample. Conducting qualitative research from the planning stage to completion of

analysis can take anywhere from one to six months, depending on the size and geographic distribution of the sample, and the capacity of the research team. The steps involved and an approximate time frame required for each step are outlined in table 2.

TABLE 2: Stages of Qualitative Research and Time Frame

| Research stage | Timeframe |
|--|-----------|
| Preparation of terms of reference (TORs); identification of and contracting with a research firm | 1-6 weeks |
| Development of research tools and finalization of the research sample | 2-6 weeks |
| Translation of research tools and training of researchers | 1-2 weeks |
| Pilot-testing and revision of research tools | 1-2 weeks |
| Conducting fieldwork | 2-3 weeks |
| Analyzing results and writing of analysis and key messages | 1-4 weeks |



A step-by-step checklist may include the following:

- 1 | Prepare TOR (including draft sample and guide for FGDs, ethnographic interviews, and IDIs).
- 2 | Select a research team.
- 3 | Agree on final sample and finalize research guide.
- 4 | Conduct piloting exercise with 2–3 FGDs and IDIs.
- 5 | Revise guides for FGD, ethnographic interviews, and IDI based on the pilot.
- 6 | Have the research team conduct fieldwork (while simultaneously preparing summary write-ups of FGDs, ethnographic interviews, and IDIs).
- 7 | Brainstorm messages and structure of the analytical report.

8 | Have the research team prepare a draft analytical report.

9 | Prepare the final report jointly with researchers.

10 | In addition to the final report, a report or slide presentation that summarizes the key findings may also be prepared.

Since the qualitative research tools used in the context of energy price subsidy reforms are not used for academic purposes, they do not have to follow a strict code for the protection of research subjects, such as the one reviewed by an institutional review board in the United States. However, they should follow certain standards, such as informing the participants about the purpose of research and how the findings will be used, and that their anonymity and confidentiality as participants to this research will be protected.

5. ANALYZING AND VALIDATING QUALITATIVE RESEARCH FINDINGS

Qualitative assessments are rich in contextual information and detail from primary accounts of consumers and other stakeholders. However, it has important limitations that should be taken into account at the analytical stage. First, it is grounded in the personal opinions and perceptions of respondents in the sample. Second, the sample is not nationally representative, but rather aimed at representing a variety of circumstances. Third, the findings lack technical backing. Due to these limitations, an accurate presentation of the analysis is essential. Use of complementary data to validate and balance the findings and consultations on the findings can enhance

the analysis and make it more robust and valuable to policy dialogue.

A summary of findings after each interview or focus group should be prepared by fieldworkers. These summaries or research notes should not only include responses of participants, but also observations of their nonverbal communication. Research notes and observations should be reviewed on the day they were noted to fill in any gaps and identify any problems (Chandler and others 2008). Research notes should be supported with transcripts, which can produce highly detailed and accessible accounts of respondent

interactions and responses (Chandler and others 2008).

The following tips can be used to present the analysis:

- Focus on messages about the key research questions that are widespread across the sample.
- Emphasize deviations from common themes and messages and explore potential factors that could explain them.
- Highlight variations across groups and messages that are specific to certain categories of respondents.
- Report external factors that may influence responses in particular groups or the comparability of findings across groups.
- Use charts, graphs, and tables for more structured questions to illustrate the number of respondents who report a specific experience or agree with a certain view.
- Use quotes to the extent that they illustrate a more widespread view.
- Present views from key-informant IDIs in the relevant sections to provide a balanced perspective.
- Structure conclusions around concrete policy implications of the findings, grounded in evidence.

Software programs can also be used to analyze qualitative data through managing, exploring, and assigning codes to data. Most research firms and individuals with experience in conducting qualitative research are well versed in using such software programs.

Various quantitative surveys or a quantitative component of the poverty and social impact analysis, projects, or government documents can be used to compare and validate findings and strengthen the background on the context of the study. Frequently used complementary sources include the following:

- Household expenditure surveys
- Household billing data analysis
- Opinion surveys
- Citizen report cards
- Project and sector-specific papers
- Evaluations of relevant programs

After reviewing the findings from analyses carried out by energy, social protection, poverty, fiscal, communication, and other specialists, the findings can be discussed with the relevant stakeholders to collect their feedback and discuss policy priorities.



6. CONCLUSION

As is illustrated throughout this good practice note, qualitative research tools can help policy makers obtain a more comprehensive understanding of the way in which households experience price subsidy reforms and may be affected by them. Qualitative research findings can inform or complement household survey data in the analysis of welfare impacts on energy consumers. In addition to assessing household welfare impacts of higher energy prices, these research tools shed light on other important aspects of price subsidy reforms, such as perceptions and awareness of the rationale for reform, possible drivers of acceptance or social resistance to reforms. As such, the tools presented here can be used to inform areas of Energy Sector Reform Assessment Framework (ESRAF) diagnostics presented in other good practice notes, such as the political economy analysis of reforms, and the note on citizen engagement and communication strategy. Qualitative research tools can also contribute to an understanding of how the impacts of price subsidy reforms may vary by the climatic conditions of the country, by illustrating household behaviors and preferences with switching between energy sources as a way to cope with price increases in other energy sources. In some countries with cold climates, for instance, rural households' turning to more intense use

of firewood due to the rising costs of gas or electricity can contribute to intensifying illegal logging and deforestation.

The main objective in understanding the welfare impacts of price subsidy reforms on poor households is to design effective mitigation measures to protect poor households against adverse impacts of higher prices and increase their public acceptability. The choice of social protection measures accompanying reforms depends on each country context. There are various factors to consider while selecting appropriate protection mechanisms, such as existing social protection programs in a country, the administrative capacity and fiscal costs of adopting potential social protection measures, and the impacts of these measures on poverty indicators. By shedding more light on the specific vulnerabilities faced by different groups of consumers against the impacts of energy price subsidy reforms, qualitative research tools can help guide mitigation policies and programs, ranging from social protection measures and energy efficiency improvement to community-based support programs, or others to cover in a more efficient and comprehensive way the wide scope of possibly adverse impacts that may ensue as a result of reducing energy price subsidies.

ANNEX: QUALITATIVE ASSESSMENT: HOUSEHOLD IMPACTS AND ACCEPTABILITY OF ENERGY REFORMS

PART A. SAMPLE GUIDE FOR FOCUS GROUP DISCUSSIONS

Introduction (5 min)

Explain the purpose of the group, which is to explore issues regarding energy use and energy affordability for various social groups, and how the population copes with energy tariff increases. Set the ground rules for the focus group (respect others' opinions, do not interrupt, turn off cell phones, stay for the duration of the group, and so on). Explain that participants' anonymity will be respected and ask for permission to record the discussion. Ask participants to *briefly* introduce themselves with some basic information (first name, age, employment status, occupation, whether they work seasonally, whether they live alone or with family or in a house or apartment, how long they have lived there, and so on). Ask a few general questions to begin the discussion, such as “What energy sources do you use in your house?”⁶ “Is it difficult for you to pay your energy utility bills?”

These questions are for introductory purposes only. If the discussion becomes heated over a particular point, explain that it will be covered in more detail during the discussion to follow, and remind participants of the study's objective. Then proceed to the first exercise. Note that some issues that are raised may not be specifically covered in the research. Prompt respondents to discuss and elaborate in the relevant section of the FGD (for example, on issues related to costs, assistance measures, and responsiveness of the electricity or district heating company).

Write-up

This exercise will be summarized as shown in table A.1:

[Urban/rural group], [location]⁸, [gender], [beneficiaries of any assistance program or not]⁹

TABLE A.1: Focus Group Composition

| Participant Name ^a | Age ^b | Occupation ^c | Main source of income ^d | Household size (including number of children and elderly) | Brief description of dwelling (house/apartment, age) | Type of energy source ^e | State if respondent received energy benefits in previous years |
|-------------------------------|------------------|-------------------------|------------------------------------|---|--|------------------------------------|--|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |

Note: a. Use of their full name is optional (to preserve confidentiality).

b. The focus group should include respondents of different ages, at least by two participants ages 18–39, 40–63, and 63 and older.

c. Indicate occupation here, as well as unemployment status.

d. For example, wage in a formal sector, small business, pension, or remittances.

e. Respondents with electricity and gas, respondents with electricity and off-gas grid (with other energy source of heating).

EXERCISE 1: ENERGY USE AND SPENDING PATTERNS (25 MIN)

The goal of this exercise is to understand how the different groups of consumers use energy, and in particular, when demand for energy use peaks.

The facilitator will start by asking the group which types of energy they use (gas, electricity, solid energy source, and so on). The discussion should then turn to daily, weekly, and seasonal energy consumption patterns.

The moderator or assistant will prepare timelines ahead of time, which will look like the graphs below. During the pilot session, the team can decide whether to use all three graphs or just the monthly one (customizing it month by month or by trimester), depending on the information that is sought for the study.

a)

| | | | | | | | | | | | | |
|---|-----|-----|-------|-------|-----|------|------|-----|------|-----|-----|-----|
| Energy use or monetary value ^a | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |

Note: Respondents with electricity and gas, respondents with electricity and off-gas grid (with other energy source of heating).

b)

| | | | | |
|------------------------------|------|---------|------|-------|
| Energy use or monetary value | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | A.M. | Mid-day | P.M. | Night |

c)

| | | | | | | | |
|---|-----|------|-----|-------|-----|-----|-----|
| Energy use or monetary value ^a | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | Mon | Tues | Wed | Thurs | Fri | Sat | Sun |

Note: a. To be tested during the pilot for a better assessment of energy use during the week or weekend.

Ask participants to focus on the timelines. Ask them to show on the timelines how much they usually spend on energy, for example, in January.¹⁰ If there is more than one energy source, ask them which source they spend most on and start with that one. Ask the group if they use more or less than this in February on a Tuesday midday and ask them to mark this on the paper. Continue in this way for the rest of the year/day/week. If the participant uses a different type of energy source, go through the same process with a different color pen for the second energy source. Participants' answers should reflect the actual bills or money due for that month. For example, if they purchase wood twice a year, in August and October, they can record the expenses in those months.

Ask the group whether anybody has a different consumption pattern. Ask a second and third participant to come up and record their expenditures using the same prompts. Once it is complete, the timeline might look like figure A.1.

FIGURE A.1: Trends in Energy Consumption

| | | | | | | | | | | | | |
|------------|-----|-----|-------|-------|-----|------|------|-----|------|-----|-----|-----|
| Energy use | xxx | xx | x | | | | | | | | x | |
| | | x | x | xx | x | | | | | | x | xx |
| | | | x | x | xx | x | | | x | x | xx | |
| | | | | | | x | xx | xx | xx | xx | | |
| | | | | | | x | x | x | | | | |
| | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |

Based on this visual exercise, the facilitator will generate a discussion that explores the following questions:

- Why is energy consumption higher at these times? We are interested in understanding daily/weekly/seasonal patterns.
- Is energy available all the time? At the peak of demand? Do the prices or availability vary depending on the month/time of the day/week?
- If energy is not consistently available, what other sources of energy do participants depend on?
- Where are fuels supplied from, and what determines their cost?

If respondents rely on solid energy sources, inquire when and how often they make purchases, and why. When is the peak consumption? When the costs are higher or lower? On what does the price of a solid energy source depend?

Write-up

This exercise will be summarized in a chart for each group showing consumption patterns over different time frames. The write-up will specify whether there are major variations in the consumption patterns and energy supply reported by different respondents, as well as whether other sources of energy are used.

The write-up will summarize participants' knowledge and opinions on where energy sources are supplied from, what determined the consistency of supply, and any notable similarities and variations in opinions between different groups of respondents. It should also include respondents' views on the costs of energy and reasons for price increases.

EXERCISE 2: COPING WITH ENERGY COST INCREASES OR PAYMENTS (25 MIN)

The purpose of this exercise is to explore how people cope with energy expenditures, in particular, seasonal spikes and price increases. The facilitator can introduce the exercise by referring to the peaks of expenditures in the timeline and asking, “Do people have difficulty covering energy costs?” Assuming the answer is yes, the facilitator can continue by asking, “What do you do to be able to pay your energy expenditures?”

The facilitator should initially solicit responses from the participants. If participants do not offer any answer, provide examples. If not mentioned, the facilitator should ask whether participants have to cut back on other expenditures to pay for electricity or natural gas or for other heating sources. The facilitator should also ask which types of expenditures are cut first (for example, basic needs, travel, medical expenses, or childcare). The good practice notes should indicate that prompting was required. If not mentioned, the facilitator should also ask whether some people choose not to pay or are unable to pay their energy bills during certain months.

- Link to the information gathered in Exercise 1.
- What do people do to be able to pay their energy bills?
- How much of their budget do they spend on energy (electricity and heating)?
- How often do people fall behind on their energy payments? What happens if they are unable to pay their bills? (Solicit the answers *first* before providing examples—such as paying in installments, borrowing money, not paying, and illegally connecting to power sources). What is the average period for late payments? What happens to those who are late with payments?
- When was the last time the energy prices went up? Was the price increase expected or unexpected? How did they deal with the cost increase? How did the increase personally affect respondents?
- Once listed, the facilitator should ask the participants to prioritize the measures using either a ranking exercise (give three asterisks (***) to the most important measure, two asterisks (**) to quite important measures, and one asterisk (*) to not so important measures) or a frequency exercise (asking how many people use each measure).
- Facilitate a discussion about the relative costs and benefits of each ‘coping measure’.¹¹ These should be documented in some detail. For example, if respondents say they ‘cope’ by not paying, ask what happens when they do not pay and, if they are subsequently disconnected, what measures are needed to reconnect. It is important to capture whether the measures that people take have only short-term implications, or whether the consequences last for some time. These details should be covered in the narrative.

- For each measure, the facilitator should also ask whether certain groups or people cannot use this measure. This should be covered in the narrative.
- The facilitator should carefully follow the ‘gender angle’ and ask the following questions, as well as discuss them in the analysis and the write-ups: “Who decides what to do with the income?” “Do men and women have the same priorities for energy use?” “If there were no men or women in the house, would energy use change?” “Would the priorities for how to spend money change?”

The facilitator will ask a follow-up question about whether certain events have a particular effect on abilities to cope with energy expenditures. If necessary, the facilitator can ask how the following situations might affect the ability to pay or cover energy expenditures and what the consequences might be:

- Job loss
- Ill health
- General inflation

The moderator will lead a discussion on incidences of nonpayment and perceptions of nonpayment. Questions should include the following: “Do you always pay your bill (or pay for coal or wood) in full, or do you have to pay in installments?” “Do you have any debt with the electricity/heating/other company or coal or wood seller?” “Have you discussed your debt with the utility company or private coal or wood seller and, if so, what solutions have been proposed?”

As a final follow-up question, the moderator will ask whether households take any measures to cope with increasing energy expenditures and, if so, what they are. The moderator will probe participants’ experience with any energy efficiency measures (for example, window replacement or insulation, walls or roof insulation, moving bedrooms to one room for all family members) and incentives to invest in such measures. Ask about knowledge of any programs or cofinancing mechanisms to invest in such measures, whether these measures can generate any substantial savings, and the main challenges that are associated with applying energy efficiency measures.

In the focus groups with respondents who use solid energy sources for heating or who have recently switched to solid energy sources, the moderator should probe for whether using wood, coal, or any other energy source has any effect on health, environment, or the availability of the resource.

In all FGDs, the moderator should ask about the ways communities and families help each other and those in need. For example, “Are there households that help each other? If so, how?” “Do neighbors help each other? If so, how?” “Do people take or are they given informal employment to cope with payments?” “Do people rely on remittances?” “Do people use social networks to seek support?”

Write-up

The findings from this exercise will be summarized in a table based on the format suggested in table A.2.

TABLE A.2: Measures to Cope with Energy Expenditures

| Measure (examples might include...) | Frequency/ranking | Benefits and costs ^a |
|--|-------------------|---------------------------------|
| Cutting other expenditures | # | |
| Cutting electricity consumption | # | |
| Switching to other energy sources | # | |
| Not paying the bill/not covering the costs (off-grid households) | # | |
| Borrowing money | # | |
| Etc. | | |

Note: a. Or effectiveness in terms of savings energy costs—to be tested during the pilot.

The write-up will also summarize the discussion on differences among coping strategies available to different respondents who can or cannot use certain strategies (table A.3). What aspects of life or household budget seem to be most affected in making adjustments to cover energy expenditures? The write-up will reflect the discussion on any special measures and possibilities for reducing energy consumption.

The write-up will also summarize incidences and perceptions on nonpayment for electricity and heating or payment arrears—how common are they, to which utilities, is there a particular reason why arrears have occurred (for example, a particular period). The suggestions offered by respondents regarding the most manageable way to deal with arrears and nonpayments. (For example, give options for paying or covering costs in installments or accountability concerns.)

TABLE A.3: Experience, Incentives, and Challenges with Energy-Saving Measures

| Energy saving measures adopted (examples might include...) | Number of respondents who have applied this measure | Alone or collectively | Comments ^a |
|--|---|-----------------------|-----------------------|
| Plastic windows | # | | |
| House/wall insulation | # | | |
| Building wall insulation | # | | |
| Roof insulation | # | | |

Note: a. Effectiveness in saving energy costs, examples.

The write-up will also describe the level of knowledge and incentives of respondents to engage in such measures and will list the most common challenges respondents perceive for applying such measures.

EXERCISE 3: FORMAL SUPPORT MECHANISMS (35 MIN)

There are two versions of this exercise, one for the focus groups consisting of participants who are poor and who benefit from these support mechanisms and one for those who are poor but do not benefit from these support mechanisms.

Option 1: For those who benefit from support mechanisms

The purpose of this exercise is to explore the usefulness of different approaches that might either already exist or that might be put in place to support households that have difficulty paying or covering energy expenditures.

The facilitator will start by asking participants to list the forms of assistance and support that they receive. They can include in this both cash transfers and other benefits (such as discounts on certain payments). The facilitator should write these down. The facilitator should probe to see whether people are satisfied with the social assistance they receive, whether it comprises a major part of their income, if the assistance is sufficient to cover their family costs, whether they use more of their social assistance to cover for increased energy costs, and so on.

- 1 | **Sufficiency of social assistance.** What kind of social assistance do the individuals and their families receive? What share of their family income falls on social assistance? What share of social assistance goes toward covering an increased energy tariff? Do they feel that the social assistance they receive is sufficient to cover the increase? Or to cover increased prices on other fuels? What hindrances have they encountered with regard to their assistance since the energy tariff increase?
- 2 | **How people apply and what they have to do to receive social assistance.** The facilitator should try to understand how people go about proving their eligibility for the social assistance, and in particular what they do not to be excluded. The process for receiving the assistance is also important, and the facilitator should ask whether it is easy to receive it and whether there are perceptions of corruption related to social assistance. Examples of questions include the following: Is it easy to apply and qualify for social assistance? Why or why not? Are the application procedures clear? What is clear and what is unclear? Was it difficult to prove eligibility? If so, why? Were they required to pay for anything they think they should not be required to pay? If the application did not result in receiving benefit, was it clear why?

- 3 | Perception of eligibility.** Does everyone who is eligible for the benefit receive it? If not, why? What are some of the obstacles to receiving the benefit? Can both men and women apply for social assistance? Does the ‘head of the household’ need to be the one to receive social assistance? What happens in households with many generations or migrant households? Are there people who have easier access to state benefits? Who are they? Are there people who cannot access benefits even if they are eligible? Who are they?
- 4 | Gender.** Does social assistance benefit men and women equally? Who receives it? Who decides what to do with the benefit money?
- 5 | What do people use the additional income for to what extent is it able to assist with energy expenses?** This question is meant to gauge how effectively the program addresses energy payments.
- 6 | Perception of social assistance effectiveness.** Does the program work well? What are all of the ways the state can help pay their bills? What are some things the state is doing well? What are some things that could be done better? How can the government help people manage their energy utility bills? What can individuals do to improve their ability to manage their bill payments?
- 7 | Experience of interacting with institutions providing social assistance.** How easy is it to get information? Do respondents know where to address any complaints or inquiries? Ask them to share their experiences dealing with the social assistance institutions.

Questions on social assistance will be posed openly. Findings may be summarized in a table that follows the format of table A.4, with an accompanying narrative to capture the detail.

TABLE A.4: Types of Cash and Noncash Formal Assistance Received by Recipients of the Group

| Type of benefit (examples might include...) | Which groups of people receive it? | Anyone in the group a recipient? | Benefits | How to demonstrate eligibility |
|---|------------------------------------|----------------------------------|----------|--------------------------------|
| Family Benefit Program | x | # | | |
| Social pension for elderly and survivors | x | # | | |
| Other | x | # | | |

It is important to learn more about which types of assistance might form the basis for helping people with increased energy expenditures. To this end, the facilitator should introduce the exercise by saying, “We are considering different ways to help poor households with their energy expenses. One idea is to add a little extra assistance to

an existing benefit scheme so that people can use this to pay their energy bills. What do you think would be the **best** scheme for helping poor people with their electricity or energy (including wood, coal, or natural gas) expenditures?”

The moderator may note suggested options on a flip chart. Ask the group to comment on each of the suggested options. Generate a discussion around the following issues and topics:

- How should vulnerable customers be defined? What is the most ‘fair’ or equitable option?
- To whom should government or social support for energy be targeted? Which one of these options is best placed to reach that group?
- If a certain measure is most preferred, why is it the best scheme and why should it be supported?
- For existing programs, what, if anything, needs to improve to make them more accessible to vulnerable consumers? Is the application process clear? Is the process for receiving the benefit clear? What are some obstacles involved in applying? Do these programs benefit the ‘right’ people? Who should they target and why?
- How much money would the government need to add to this benefit to make poor people who currently do not apply feel like it is worth it to do so?
- What would be the best way to deliver the extra money or assistance—in equal amounts every month? Payments in only certain months of the year? If so, which months? One payment per year in a lump sum?
- What should happen to people who receive the allowance but still do not or cannot pay their energy bills?

Then ask the participants to evaluate social assistance schemes according to the following criteria: (1) convenience, (2) effectiveness in improving family well-being, and (3) reaching the poorest and most needy people. Respondents can score out of 5 for each criterion for each option (the moderator can give each participant cards numbered 1–5 and ask them to vote for each criterion for each option, or the group can agree on a number for each option). The results can be summarized as in table A.5.

TABLE A.5: Comparison of Different Options for Delivering Energy Subsidy Support

| | Convenience | | Impact on wellbeing | | Reaches the poorest and most needy people | |
|-----------------|---|----------------|------------------------------|----------------|---|----------------|
| Option 1 | Number of people scoring 1-5 (e.g., 3 people scored 2, 4 people scored 1) | Average scores | Number of people scoring 1-5 | Average scores | Number of people scoring 1-5 | Average scores |
| Option 2 | Number of people scoring 1-5 | Average scores | Number of people scoring 1-5 | Average scores | Number of people scoring 1-5 | Average scores |
| Option 3 | Number of people scoring 1-5 | Average scores | Number of people scoring 1-5 | Average scores | Number of people scoring 1-5 | Average scores |

OPTION 2: FOR THOSE WHO DO NOT BENEFIT FROM SUPPORT MECHANISMS

The purpose of this exercise is to understand why this group is excluded from benefits and to identify ways to mitigate the impacts of rising energy costs for this group.

The facilitator should aim to understand the following:

- 1 | Why don't participants receive support? Is it due to
 - a) Lack of need? (Are there people who need social assistance? Those who do not? What are their characteristics?)
 - b) Lack of awareness?
 - c) The application process?
 - d) The exclusion criteria? (which one(s)?)
 - e) Perceptions about those who receive aid?
 - f) Other?
- 2 | What kind of support would participants want to receive?
 - a) Which program are they most likely to apply to?
 - b) Other ideas?
- 3 | What experience have participants had interacting with institutions that provide social assistance?
 - a) How easy is it to get information?
 - b) Do respondents know where to address any complaints or inquiries?

Write-up

This exercise should be summarized in the provided tables (refined and agreed during the piloting). The write-ups should include comparison of responses for Option 2 between FGDs with the low-income and middle-income respondents. Summary of answers for open-ended questions should be comprehensive. When possible, verbatim statements of the respondents should be captured as well.

EXERCISE 4: KNOWLEDGE, ATTITUDES, AND ACCEPTANCE OF ENERGY TARIFF INCREASES (25 MIN)

Start with an open question on how much respondents know about tariff increases in the energy sector, including electricity and gas. How much do they believe these increases have personally affected them?

Concerning tariff increases, ask participants how much they know about how the tariffs for electricity and gas are calculated. Which institutions do they think are responsible for determining or setting these? What factors determine the tariffs as they are now, and what factors should determine them if they think there is any discrepancy? What is the reason for the most recent price increases? In their opinion, are tariff increases justified? Why or why not?

What are some of the key concerns and suggestions participants have concerning their interaction with energy service providers or utilities? (Pose this question openly. If necessary, prompt for issues regarding reliability of services and quality of service in general, fairness, transparency, and handling customer or buyer inquiries or complaints.) To what extent will improvements in these areas justify an increased price in services? This discussion should generate very specific issues and suggestions for improvement. The moderator should help group the issues mentioned (for example, regarding the electricity company, the gas company), the general complaints, and explore each of the issues in detail. Participants should also be asked about their knowledge of, interaction with, and communication channels available regarding regulators. The participants should be asked about their knowledge of tariff-setting responsibilities and authorities, and how tariff-setting affects the gas and electricity companies and solid fuel providers. The moderator should make a note of whether all participants are aware of the tariff-setting arrangements and their relationship to the gas and electricity companies. The moderator should also make a note of whether all participants agree with a certain issue or whether different respondents feel strongly about a different type of issue regarding energy providers and/or regulators.

What channels are available to citizens to act on their grievances and the problems listed above? Describe the environment for seeking redress to complaints, requests for information, and so on. Ask participants to offer details about their experience pursuing claims or complaints or when they have sought more information or

clarification on their bill or quality of service, for example. Were claims resolved? If not, what do they think is the main issue and why (for example, lack of capacity, lack of interest, and so on)?

What are some priority changes and improvements to energy services that can substantially improve the way residents interact with electricity and natural gas providers? Ask participants to rank these measures (either together as a group or give each a score of 1-5). List them in order of priority on a board or flip chart. Discuss each of the ideas in detail. Ask for concrete examples, stories, and suggestions, starting with the most important or urgent.

Draw two charts (one for electricity, one for natural gas),¹² marking various hypothetical levels of tariff increase. Note that these are hypothetical. If discussing specific options for tariff increase is too controversial, skip the charts. Based on the discussion above, ask participants under what conditions would they be willing to pay more (for example, 25 percent, 50 percent, or 75 percent) for electricity and heating, if at all. Record the number of responses and associated comments. Summarize this exercise in a table (see tables A.6 and A.7 for examples). The results of this exercise will be aggregated across groups in the final analysis.

TABLE A.6: Willingness to Pay

| Electricity | | | | Comments |
|--------------------------|--|--|--|----------|
| How much do you pay now? | How many respondents are ready to pay +25% | How many respondents are ready to pay +50% | How many respondents are ready to pay +75% | |
| | | | | |
| | | | | |
| Natural Gas | | | | Comments |
| How much do you pay now? | How many respondents are ready to pay +25% | How many respondents are ready to pay +50% | How many respondents are ready to pay +75% | |
| | | | | |
| | | | | |

TABLE A.7: Willingness to Pay—Conditions

| Conditions under which they are willing to accept higher tariff (electricity) | Importance (average score) | Comments |
|---|----------------------------|----------|
| | | |
| | | |
| Conditions under which they are willing to accept higher tariff (natural gas) | Importance (average score) | Comments |
| | | |
| | | |

Write-up

This exercise will be summarized according to tables A.8 and A.9, with associated narrative.

TABLE A.8: Issues Interacting with Energy Service Providers

| Issues/challenges (examples might include...) | Number of respondents who mention | Comments (examples; any improvements/measures that have made a difference) |
|---|-----------------------------------|--|
| Electricity | | |
| Illegal connections | # | |
| Unfair metering | # | |
| Not possible to get information on services | # | |
| Nontransparency on tariff-setting | # | |
| Natural gas | | |
| Nontransparent or unfair tariff setting | | |
| Not possible to get disconnected | | |
| Not possible to regulate consumption | | |

Note: This discussion would not be valid for households that do not use the services (but instead use wood for heating).

The write-up will also summarize prevalent attitudes toward broader energy tariff increases (and capture any particular details that participants are aware of or feel more strongly about).

TABLE A.9: Priority Measures That Will Increase Acceptability of Reforms or Tariff Increase

| Measure (examples might include...) | Number of respondents who mention | Rank or score (starting with highest ranked/ scored) | Comments |
|-------------------------------------|-----------------------------------|--|----------|
| More information on [XX] | # | | |
| Better metering system | # | | |
| Other | # | | |

Note: This discussion may not be valid for households that do not use the services (but instead use wood for heating), though they may be indirectly affected.

If dissimilar suggestions are given for different providers (electricity/heating) the table can be split in two parts, similar to table A.7.

Wrap-up (5 min)

What are the top 3–5 improvements in energy services (price, quality, governance) that are the most important for, and would have the greatest positive impact on, respondents' lives? These could be ranked in one list for the whole group, or recorded individually, with number of people mentioning each (depending on how great a consensus there is within the group). The recording method should be used across all groups so that results can be aggregated in the final analysis.

Thank FGD participants for taking the time to answer the questions. Emphasize that their answers are very valuable and will be used to inform changes to the country's energy sector. Re-emphasize that their anonymity will be respected.

General Provisions

A minimum of two people should facilitate focus groups. One should be the main moderator who has extensive experience conducting focus groups, and another a notetaker or second facilitator. All FGDs should be recorded, so it will be possible to go back to responses if insufficient information is provided in the write-ups and tables. All notes and flip charts used during the FGD should be saved. Since the qualitative assessment aims to understand the impact on and attitudes toward energy tariff increases among different consumer groups, it is very important to retain participants' stories and experiences. The narrative write-ups should include vivid quotes that illustrate the participants' point of view. All quotes should include proper references (location, type of FGD, participants' gender, age, and occupation). The responses that required prompting by the facilitator should be noted. The facilitator should keep the discussions of any given issue 'on track' and remind respondents that the focus group may not cover all of the raised issues, but all concerns should be noted and if possible, ranked based on their relevance and importance to participants. The moderator should note any age or gender variations in answers, pose follow-up question to further explore these variations, and record the noted differences carefully for the final report.

PART B. SAMPLE GUIDE FOR ETHNOGRAPHIC AND IN-DEPTH INTERVIEWS

Ethnographic Interviews

Ethnographic interview questions will focus on the following:

- Energy bills;
- Most stressful times of year related to energy bills;
- How bills and ability to pay them have changed, if at all, in the last two years;
- Other changes that have affected a household's ability to pay energy bills;
- Mechanisms for coping with energy payments;
- The effectiveness of these measures in saving energy and money;
- The impact of these measures on a household's budget/needs/well-being; and
- Any support measures that have helped a household cope with payments.

Implementing firms can use the following sample questionnaire as guidance and make their own questionnaires to complement or validate issues from the focus group guide, depending on the competence of the key informant interviewed:

- 1 | Do you pay your electric bills? If not, why not?
- 2 | Who pays the electric bills in your household?
- 3 | Do you pay your electric bills regularly?
- 4 | During the last two years, what were the highest and the lowest amounts of your electricity bill?
- 5 | How do the bills and rent payments affect your household budget? How much of the total income goes toward these items?
- 6 | How important is your electricity bill as it stands today and how significant is it for your household? (not important at all, not very important, somewhat important, and very important)
- 7 | Is your household budget affected when the prices of electricity, water, and natural gas or liquefied petroleum gas (LPG) increase?
- 8 | If so, do you try to decrease your use of these services? If so, what kind of restrictions do you impose on your usage?
- 9 | Is your total income sufficient to pay your bills and rent? If not, how do you meet your expenses when your income is insufficient?

- 10 |** Was there a time when you could not pay your bills? When was it? What did you do?
- 11 |** Do you know how much your neighbors' electric bills are? Are they more or less than yours and if so, what do you think accounts for the discrepancy?
- 12 |** During the last two years, what did you do when your budget did not suffice to pay your electric, fuel, water, and gas bills? When your income does not suffice, do you go without water, electric, and gas services? Is it possible to cut down on these expenses?
- 13 |** When your income does not suffice, which expenses do you cut down on first? Why? Do increases in prices and expenditures related to these services cause you to cut down on your basic needs, such as food, education, and health?
- 14 |** Due to limitations imposed upon electric, water, and gas expenditures or your inability to pay, was the health of your household members negatively affected? How?
- 15 |** Until now, have you ever received help from an institution or a person to pay your electric, water, or natural gas bills? If so, from whom and what kind of help did you receive? How much was the amount of support?
- 16 |** During the last two years, did you borrow money to pay your utility bills? If so, how much and from what source?

IDIs with NGOs and Associations for Consumer Protection

These interviews will mostly complement views of households. The following questions will be covered during the interviews:

- 1 |** What are the main issues related to fairness and accountability in the relations between electricity consumers and distribution companies, as well as between citizens and the state?
- 2 |** What is your main area of expertise related to the energy sector and energy consumers? What is the motivation behind your organization's or association's work?
- 3 |** Do you facilitate requests or complaints from consumers to energy companies? What type of consumers approach your organization? What type of issues do you encounter? How many cases do you receive?
- 4 |** What is your experience with such cases? Are any issues resolved? Was the result in favor of consumers or companies? How long does it take to resolve complaints? How much does this process cost?

- 5 | What kind of improvements should be made to increase the system's transparency and accountability?
- 6 | How informed are consumers about their rights, and what can be improved in terms of citizens' access to information, and communication?

IDIs with Social Assistance Workers

These interviews will explore formal support mechanisms available to the poor. Questions will include the following:

- 1 | What are the eligibility criteria for heating benefits? How have they changed (this or last year)? What do you think about these changes?
- 2 | Is the benefit accessible? What is your perception of the number of people who have received in the recent years? Is it growing or decreasing? Why?
- 3 | What comments do you have about eligibility and access (both regarding ease to process and ease of application)? Are there certain groups or types of people that are eligible, but generally do not apply much? What are the reasons?
- 4 | Are there any improvements you find necessary in terms of eligibility, processing, and incentives for eligible people to apply?
- 5 | Do you see much overlap in who receives heating benefits and other social benefits?
- 6 | What about effectiveness of the benefit—has it changed in terms of the amount or generosity? Is it significant in terms of covering energy costs?
- 7 | Can anything change to make it more effective or more significant?
- 8 | What do you think about the three different support programs for energy bills? Are cash transfers to the poor (using income or means testing) a good way to compensate for the increase in electricity and heating prices?
- 9 | Do you think there is much room for fraud? For example, people misrepresenting their income?
- 10 | Do you have any general opinions about electricity and heating tariff reforms, and the role of the social assistance system in compensating impacts (is it fairly effective or insignificant)?
- 11 | What priority improvements could make it more effective?

If the ideas revolve exclusively around more resources and staff for social assistance offices, try to prompt about improvements that would increase the ease and effectiveness for beneficiaries. In the event of low capacity or low budgets, it is likely that a lot of ideas will revolve around those institutional needs. It is important

to record that, but also go a bit deeper and gauge their professional opinion on the actual programs.

IDIs with Energy Company Representatives

These interviews will complement focus groups. They will seek understanding of energy use/patterns and attitudes toward energy tariff increases via the following questions:

- 1 |** What is your company's background? How many buildings does it serve, where, and for how long?
- 2 |** What are the average bills for heating different types of households? How do they vary through the year? Are there any major variations (such as by type of household, building, or month)? How are the variations determined?
- 3 |** What is the process of bill calculation (starting from meter readings)? Are there any variations in this process? Can you describe the whole chain, from consumer to provider of bills and contracts?
- 4 |** What are the advantages and challenges of this billing system?
- 5 |** What are the main issues you see in terms of bill collection? Are any directly related to tariff changes?
- 6 |** What is the scale of nonpayment (for their consumers, and also if they have information on the city or national level)?
- 7 |** Which support measures can be most helpful in consumer payments?
- 8 |** Regarding issues and complaints by residents—what type of issues arise? How are they handled or resolved? Do residents have enough information about their rights and responsibilities and those of other institutions?
- 9 |** What are the key recommendations for improving clarity or communication about roles and responsibilities?
- 10 |** What key regulations or policies are missing or need to be changed?

ENDNOTES

- 1 theoretical discussion on qualitative research and its added value or limitations is outside the scope of this good practice note. For a comprehensive discussion on qualitative research, see Denzin and Yvonna (2011).
- 2 As Good Practice Note 1 details, the financial incentives created by price subsidies for diversion and smuggling might have led to fuel shortages and black marketing, resulting in higher fuel prices and, in the worst case, inadequate supply of fuels even at high prices. For electricity, natural gas, and district heating, underpricing might have led to unacceptably large financial losses by utilities and frequent supply interruptions as they struggled to pay for operating and maintenance costs, resulting in demand for subsidized energy far exceeding supply.
- 3 Prepaid meters address overcharging due to estimation rather than measurement of consumption, unless power shortages are so severe that prepaid meter users end up paying in advance for electricity they cannot get when they need it.
- 4 Linemen are persons employed for the repair and maintenance of electricity power lines.
- 5 Research in Georgia, for example, shows that persons with disabilities often do not register as such due to social stigma or lack of awareness about associated benefits. Thus, they are likely to be underreported as a group in national surveys, and the issues relevant to them more difficult to identify and analyze.
- 6 Each FGD will begin by having participants fill out the basic data questionnaire according to the questions listed. The questionnaire will be developed and finalized by the contracted firm in consultation and after agreement with the World Bank team.
- 7 Information about the respondents participating in a focus group should be collected before the FGD or during recruitment to use the time of the FGD more efficiently.
- 8 Need to indicate the type of location (for example, capital, administrative center, or village).
- 9 Beneficiaries of the Family Benefit Program or other assistance program (such as emergency benefits and heating benefits in previous years).
- 10 The variance is to be determined during piloting (for example, seasonal, weekend vs. workdays, day vs. night).
- 11 The term 'coping' may require careful translation and explanation by the moderator.
- 12 Depending on the group, the heating chart will refer to either district heating or other fuels (coal, wood, gas). If respondents primarily use electricity for heating, only one chart on electricity can be drawn. Note that the wood users may not be part of the billing system, and thus tariffs may not affect them as directly.

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Energy Subsidy Reform Assessment Framework

LIST OF GOOD PRACTICE NOTES

- NOTE 1** Identifying and Quantifying Energy Subsidies
- NOTE 2** Assessing the Fiscal Cost of Subsidies and Fiscal Impact of Reform
- NOTE 3** Analyzing the Incidence of Consumer Price Subsidies and the Impact of Reform on Households – Quantitative Analysis
- NOTE 4** Incidence of Price Subsidies on Households, and Distributional Impact of Reform – Qualitative Methods
- NOTE 5** Assessing the readiness of Social Safety Nets to Mitigate the Impact of Reform
- NOTE 6** Identifying the Impacts of Higher Energy Prices on Firms and Industrial Competitiveness
- NOTE 7** Modeling Macroeconomic Impacts and Global externalities
- NOTE 8** Local Environmental Externalities due to Energy Price Subsidies: A Focus on Air Pollution and Health
- NOTE 9** Assessing the Political Economy of Energy Subsidies to Support Policy Reform Operations
- NOTE 10** Designing Communications Campaigns for Energy Subsidy Reform