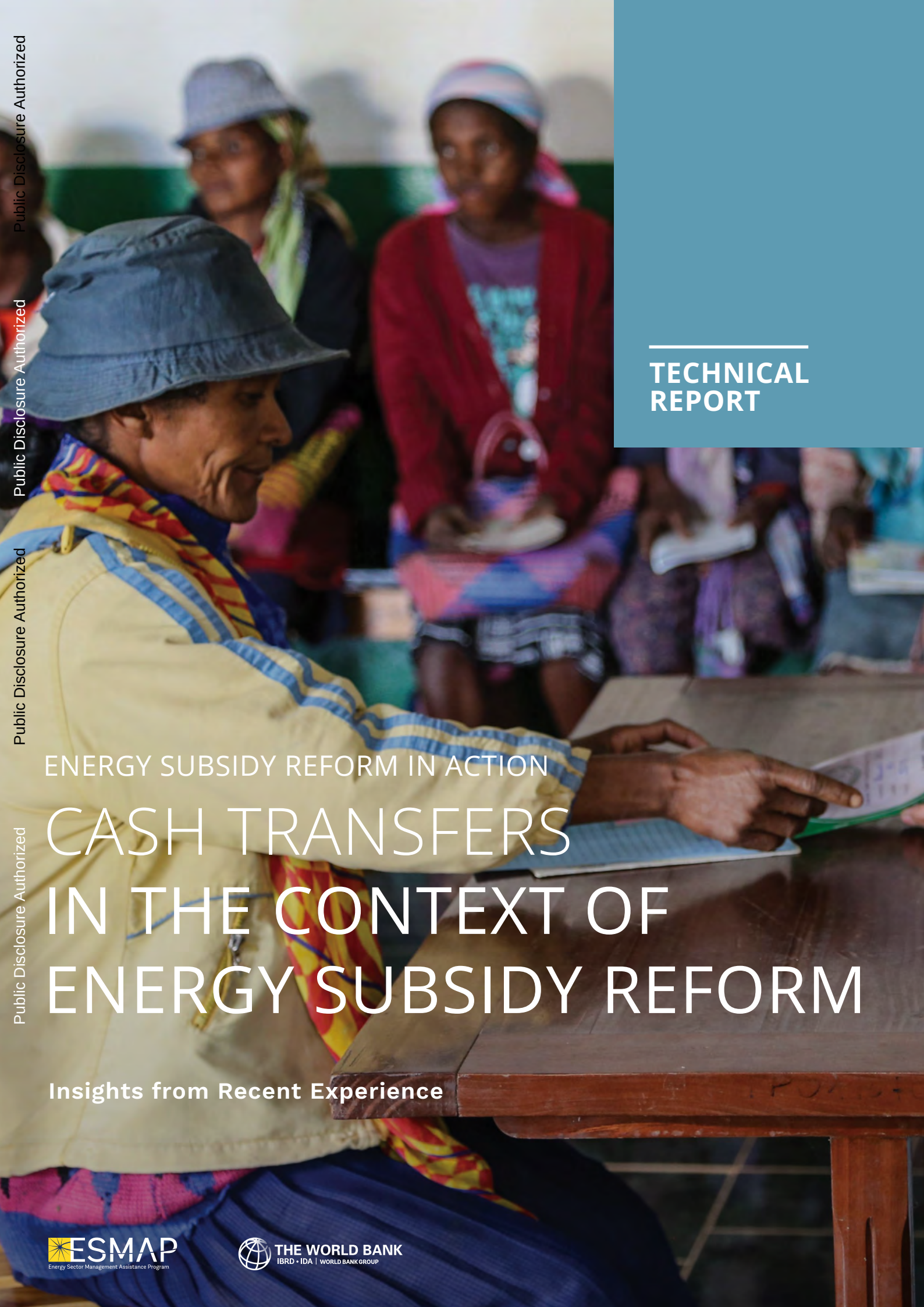

TECHNICAL REPORT

ENERGY SUBSIDY REFORM IN ACTION

CASH TRANSFERS IN THE CONTEXT OF ENERGY SUBSIDY REFORM

Insights from Recent Experience

ESMAP
Energy Sector Management Assistance Program

THE WORLD BANK
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Anit Mukherjee, Yuko Okamura, Ugo Gentilini, Defne Gencer, Mohamed Almenfi, Adea Kryeziu, Miriam Montenegro, and Nithin Umapathi

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ABOUT ESMAP

The Energy Sector Management Assistance Program (ESMAP) is a partnership between the World Bank and 24 partners to help low- and middle-income countries reduce poverty and boost growth through sustainable energy solutions. ESMAP's analytical and advisory services are fully integrated within the World Bank's country financing and policy dialogue in the energy sector. Through the World Bank Group (WBG), ESMAP works to accelerate the energy transition required to achieve Sustainable Development Goal 7 (SDG7) to ensure access to affordable, reliable, sustainable, and modern energy for all. It helps to shape WBG strategies and programs to achieve the WBG Climate Change Action Plan targets. Learn more at: https://esmap.org

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ABOUT THIS SERIES

This report is part of the "Energy Subsidy Reform in Action" series produced by the ESMAP Energy Subsidy Reform Facility, with the objective of drawing insights from recent experiences and emerging approaches related to reform of energy subsidies in developing countries. The series includes issue-specific papers from various relevant domains such as energy sector reform, macroeconomic and fiscal policy, carbon pricing, poverty and distributional analysis, social protection, political economy, and communications.

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Foreword

As we observed particularly over the last two years, energy plays a central role for societies and economies, and when the balances enabling reliable and affordable supply of energy to households and businesses are disrupted, the impacts are felt across multiple dimensions. Moreover, the food and fuel crises of 2022 put social protection at the forefront of the global agenda, with social assistance proving to be essential for helping governments address the impacts of various global and regional shocks. Effective social protection delivery systems not only enable swift and targeted interventions during crises, but also improve the progressivity, efficiency, and effectiveness of programs in non-crisis periods as well. The intensified efforts during and after the pandemic to strengthen delivery systems by putting in place comprehensive data and information systems, prioritizing digital payments, and leveraging innovations in technology, have the potential to further enhance speed and cost-effectiveness of future responses.

Energy subsidies, which artificially lower the cost of producing, supplying, and consuming energy, including fossil fuels, are wasteful and inefficient. When provided for fossil fuels, these subsidies can harm the environment and undermine climate change mitigation efforts. They are also an inefficient way to the poor – as they tend to be regressive and divert significant fiscal resources from critical government priorities. Given their multiple negative impacts, reforming energy subsidies is a key component of many governments' energy, climate and macro-fiscal reform agendas. When energy subsidies are reformed, prices can increase for different user groups, with potential impacts on the poor and

vulnerable households. Therefore, while designing energy subsidy reforms, it is critical to understand who will be affected, and to what extent, and include mitigation measures that address the most critical impacts. Cash transfers have a central role to play as part of such efforts, as they can provide households with cash payments that can be used for a variety of needs, including energy costs. And indeed, in recent years, social protection, in general, and cash transfers, in particular, have come to play an important role in supporting energy subsidy reform efforts.

In this context, this report, which focuses on how targeted and well-designed cash transfers can help mitigate the impact of energy subsidy reforms, particularly on the poor and the vulnerable, and strengthen the design and delivery of a comprehensive reform effort, is highly relevant.

We would like to thank all the colleagues who contributed to this multi-year collaboration on energy subsidy reforms between the World Bank's Social Protection and Jobs Global Practice and ESMAP, and look forward to further partnerships to tackle one of the most pressing priorities of our times.

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Abbreviations

BEV	Battery Electric Vehicle
ESMAP	Energy Sector Management Assistance Program
GDP	gross domestic product
GHG	greenhouse gas
HUS	Housing and Utility Subsidy (Ukraine)
IMF	International Monetary Fund
LPG	liquefied petroleum gas
MoF	Ministry of Finance
SIUBEN	Sistema Único de Beneficiarios (Dominican Republic)
SMS	short message service

Acknowledgments

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Executive Summary

Energy subsidies, which have a long history of use by governments around the world, have been rising in recent years after a brief period of decline. In 2020, low crude oil prices and weak economic conditions due to the COVID-19 (coronavirus) pandemic resulted in record low energy consumption subsidies. But their 2020 total—US$180 billion—was still significant (IEA 2021). Energy consumption subsidies rebounded as demand recovered; prices rose because of increased energy demand amid tight supply conditions; and various crises followed that required increased support to households and firms. In 2022, total global support for the consumption of fossil fuels exceeded US$1 trillion according to the IEA's latest estimates (IEA 2023). These growing energy subsidies bring with them risk of further distortions across the economy, environmental damage, and significant drain on fiscal resources.

Despite their significant wider costs, subsidies are used by governments for various policy, and political, reasons. They often are the outcome of a delicate balancing act that many countries have sought to manage over several decades. General price subsidies for gasoline, diesel, cooking gas, or electricity can provide some degree of benefit to the population at large, and to the poor. For resource-rich countries, subsidizing energy, especially fossil fuels, is perceived as proffering to citizens a tangible claim to a national resource. In contexts in which the government is generally perceived as not fully responding to citizens' demands, fuel subsidies may help tackle inequality and grievances. The magnitude of energy subsidies often dwarfs social assistance spending in many developing countries.

Faced with recent external shocks, governments around the world have had to manage difficult tradeoffs between the need to protect their citizens against substantial increases in the cost of living and the fiscal risks that greater and continued subsidies impose. After the disruption of global economic activity by the COVID-19 pandemic, the energy and food price shocks caused by the Russian Federation's invasion of Ukraine have introduced new challenges and strong headwinds against efforts to reform energy subsidies in many countries. In fact, the number of countries increasing, reintroducing, or scaling up general fuel price subsidies (as opposed to targeted compensation) has risen. For example, according to an ongoing global tracking effort on the use of social protection and subsidies to mitigate the impact of price shocks, between early 2021 and the end of 2022, at least 60 countries expanded or introduced fuel subsidies, and at least 98 countries announced a total of 272 energy-related measures, including subsidies for fuel, electricity, transport, and electric vehicles, as well as price controls for fuel (Gentilini et al. 2022). Although such actions can be justified as emergency responses in crisis conditions, they are bound to entail significant fiscal risk in the long term.

General consumption subsidies, such as universal price subsidies for fossil fuels, tend to be regressive. They are an inefficient way of reaching the poorest. Recent literature clearly shows that the benefits of generalized price subsidies are captured mostly by those who consume more, who often, but not always, tend to be higher income groups. In some cases, a substantial share of the benefit from such subsidies often accrues to politically influential and vested interests who are well off rather than to those who most need financial support (Benes et al. 2016).

Over the past several decades, as part of the evolving understanding of energy subsidy reforms, there has been growing recognition of the potential of targeted cash transfers to support the poor and vulnerable to help governments achieve desired policy outcomes at lower fiscal cost and in a sustainable manner. Reflecting the recognition that energy subsidy reforms and resulting increases in energy prices can have a negative impact on lower-income households, many countries tend to opt for a gradual removal of subsidies, accompanied by compensatory mechanisms, whether on a temporary or longer-term basis. In this context, cash transfers have come to be one of the main instruments used to mitigate the negative welfare effects of energy subsidy reforms on households. With targeted cash transfers, governments can reach those whom they wish to support, rather than all consumers as with universal price subsidies.

The use of cash transfers to mitigate the impact of price increases from an energy subsidy reform puts a country's social protection framework in the spotlight, along with the role social protection can play in bolstering national commitments to reduce greenhouse gas (GHG) emissions. While getting prices right is important in eliminating distortions and incentivizing efficient use of energy, cash transfers can help countries mitigate and adapt to climate change and make the transition to a green economy by smoothing the adjustment to changing energy costs (Costella et al. 2021).

Insights from Global Stocktaking on Cash Transfers and Energy Subsidy Reform

The global stocktaking exercise undertaken as part of this study found that a significant share of countries introduced energy subsidy reforms in the context of a macro-fiscal crisis that had put pressure on the government to rein in public spending. The global stocktaking, which covered the period from the mid-1990s to 2016, showed that 10 of 24 reform episodes took place between 2008 and 2012, a period marked by economic recession and energy price shocks. Of the countries included in the stocktaking exercise, one-third spent more on energy subsidies than on social assistance.

The global stocktaking and case studies show that in countries that have reformed energy subsidies while complementing them with cash transfers, the reform objectives, design, and implementation approaches evolved over time, often in line with

the increasing use and sophistication of social protection delivery instruments. The sequencing of price reform and targeted cash transfers varies across countries. In some countries the cash transfers preceded the removal of generalized price subsidies, while others introduced them after revisions in prices.

The majority of the cases reviewed for the global stocktaking exercise involved cash transfers that were introduced as new programs with their own administrative, financing, and implementation systems. More than half of the cash transfers accompanying energy subsidy reforms were introduced as new programs. The countries that expanded the coverage of cash transfers by scaling up an existing program (Mauritania, Morocco, and Ukraine) sought to better target vulnerable, poor, or near-poor households, or broaden their coverage to a near-universal transfer, depending on the government's reform objectives. Although most countries recorded a single reform episode, among those countries that went through multiple reform episodes, there was a clear trend: they first introduced compensatory cash transfers as new programs, and later expanded an existing program (e.g., Ghana, Indonesia, Mauritania, and Ukraine). In several cases, program design was refined over time, with eligibility criteria, benefits structure, and coverage revised in succeeding phases (as in India and Ukraine).

Coverage of cash transfers varied across the sample reviewed, indicating differences in ambition, resources, and tradeoffs across countries and episodes. Drawing on a review of 22 reform episodes in 16 countries for which coverage data were available, Figure ES.1 shows the coverage of cash transfer programs, along with whether they were new or expanded programs.[1] The coverage rate is measured by considering program beneficiaries' share of total national population. In rare episodes that had a combination of transfers—cash and noncash (vouchers, lifeline tariffs)—only cash transfer beneficiaries were considered when estimating coverage.

The variation in the range of coverage is large, from minimal to quasi-universal. For example, the 2012 transfers in Nigeria were estimated to have reached less than 1 percent of the population, whereas at the other end, the Islamic Republic of Iran's 2010 cash transfer was almost universal (Atansah et al. 2017). Three episodes had coverage ratios in the top of the range (50–100 percent of the population),[2] seven fell in the middle (30–50 percent),[3] and five covered a relatively small share (5–30 percent).[4] The remaining seven reached less than
5 percent of the population even after multiple efforts to expand coverage.[5] For example, as part of the 2014–16 reform, Ukraine moved from a generalized energy price subsidy to a targeted cash transfer that was closer to an unconditional cash transfer in its design. Similarly, India reoriented liquefied petroleum gas (LPG) subsidies to low-income

[1] Out of the original total of 18 countries, data on the coverage of transfers in Kenya and Tunisia were found to be unavailable.

[2] Iran (2010), Syrian Arab Republic (2008), and Jordan (2012).

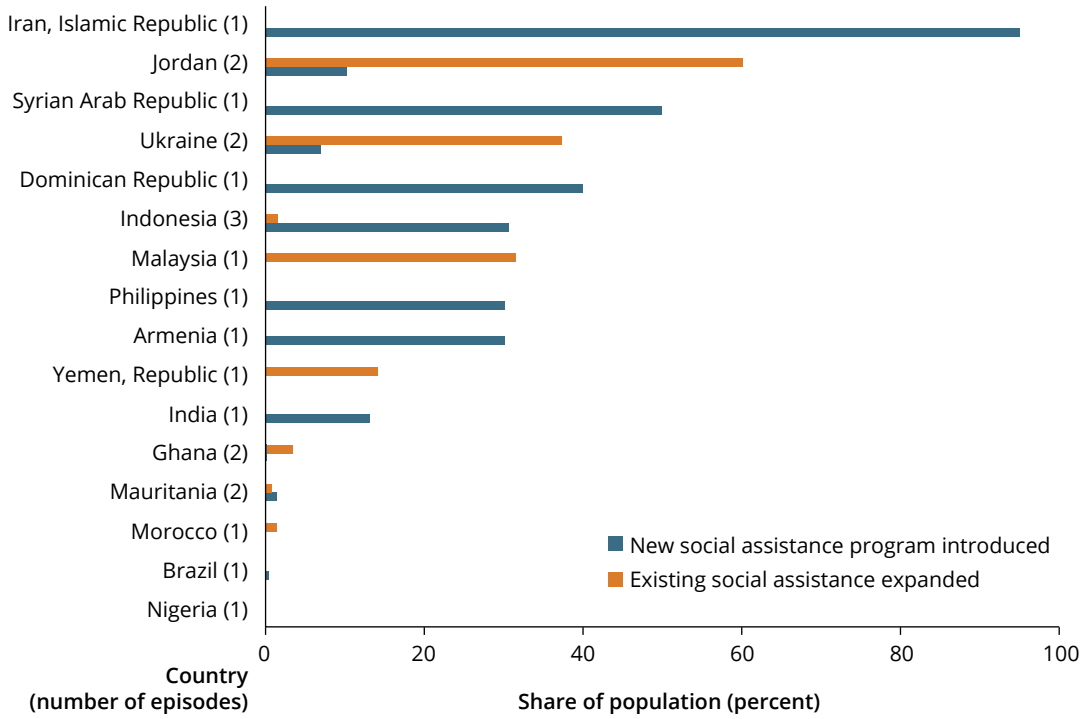
[3] Armenia (2000), the Dominican Republic (2008), the Philippines (2008), Indonesia (2005, 2008, 2013/14), and Ukraine (2016).

[4] Jordan (2008), Ukraine (2014), India (2013), Yemen (2010), and Malaysia (2013).

[5] Nigeria (2012), Ghana (2005 and 2013), Mauritania (2011 and 2012), Brazil (2001), and Morocco (2013).

FIGURE ES.1

Coverage of Cash Transfers in Energy Subsidy Reforms by Country and Type



Source: Authors' compilation based on data from the International Monetary Fund, the World Bank Group, and the International Energy Agency.
Note: Based on 22 reform episodes in 16 countries for which cash transfer coverage data were available. Newly initiated programs are in blue, and expansions of existing programs are in orange.

populations over time through the PAHAL and Ujjwala programs starting in 2014.[6] This entailed expanding the beneficiary base to those without access to LPG, while at the same time curtailing the benefits of the subsidy for the higher-income groups. Meanwhile, Indonesia continued generalized price subsidies for cooking gas while simultaneously providing households with LPG starter kits free of charge, in an apparent effort to reduce the use of kerosene (Kojima 2021).

Some countries expanded coverage by orders of magnitude over time. For example, Ukraine increased cash transfer coverage substantially between episodes. In Indonesia, where the first episode (in 2005) started out with a high rate of coverage, two subsequent episodes (in 2008 and 2013) expanded coverage only marginally. Although any definition of success is specific to a country's context and reform objectives, the review indicates that countries that implemented broad-based, relatively generous cash transfers covering a

[6] For program details, please see https://www.pmuy.gov.in/index.aspx.

large share of the population experienced fewer implementation challenges or stakeholder pushback than others during the early stages of reform.

The scope of cash transfers (i.e., their generosity and coverage) influences the magnitude of net fiscal savings. The magnitude of the savings depends on the baseline expenditure, design, and implementation of the reform process, including the scope of the cash transfers. The change in fiscal savings before and after reform in 14 countries is discussed in greater detail in Table 1.1 in Chapter 1. The energy products or services targeted also varied.

Country Case Studies

This report examines experiences of two countries that used compensatory cash transfers to support energy subsidy reforms to better understand the drivers, objectives, implementation mechanisms, and modalities of cash transfers. To complement the global overview, exploration of specific country cases in greater depth can provide insights into approaches to compensatory cash transfers to support energy subsidy reforms. To that end, specific reform efforts from the Dominican Republic and Ukraine were selected as illustrative cases. These cases were selected because they offer insights into challenges and opportunities related to cash transfers in different contexts, where social protection is at the core of the implementation strategy. The goals, design, and implementation approaches of these reforms evolved over time, often in line with the increasing use and sophistication of social protection instruments.

The Dominican Republic's case provides insights into how governments can use existing social protection systems to successfully design and deliver an energy subsidy reform program. The energy subsidy reform efforts benefited from the relative flexibility and efficiency of the earlier Solidaridad conditional cash transfer program, which provided a platform for the government to introduce and integrate the energy-sector-specific Bonogas and Bonoluz programs rapidly and reach scale. The experience underscores the importance of understanding which segments of the society will be affected, introducing mitigation measures to address impact, building trust, and creating supportive coalitions for reform. The case also offers a good illustration of how direct compensation mechanisms can be further improved over time.

Ukraine's subsidy reform effort of 2014–16 took place in the context of internal and external pressures that required the government to restructure high levels of budgetary subsidies. Through the course of the reform process, tariffs for gas, electricity, and district heating were brought closer to cost-recovery levels, accompanied by compensatory transfers. The government implemented a broad-based and inclusive cash transfer program that reached nearly half of all households in the country and complemented this program with a well-designed communications and outreach campaign. The government

built on an existing energy compensatory transfer program, the Housing and Utility Subsidy (HUS), as the primary mechanism for social assistance payments. Direct transfers to beneficiaries replaced budgetary transfers to energy utilities, leading to increased transparency, payment discipline among HUS recipients, and subsidy management at the macro level. Program uptake was bolstered by a strong communications campaign that outlined clear rules and expectations and the rationale and timeline for phasing out compensatory transfers. On the one hand, the government's program design choices and implementation approach facilitated the acceptance of the overall sector reform agenda and strengthened the HUS mechanism over time. On the other hand, this experience illustrates the tradeoffs involved in using generous compensatory transfers to mitigate the effect of tariff increases, in that the generosity of transfers has an impact on fiscal savings from reform, and managing beneficiary expectations and committing to clear timelines are critical for avoiding unsustainable fiscal costs.

Key Takeaways

This report reviews the role of social assistance, and cash transfers in particular, in mitigating the impact of energy subsidy reforms. Chapter 5 of this report summarizes key conclusions, insights, and takeaways from the review of country cases.

A review of recent reform episodes rendered several key takeaways on the use of cash transfers in the context of energy subsidy reform.

- Cash transfers can facilitate the implementation of price reforms by mitigating the impact of the reform on key stakeholders, thereby building trust and enabling support among key stakeholders.
- The review indicates that cash transfer design and implementation arrangements require careful upfront work and fine-tuning over time to ensure continued alignment of the program approach with reform objectives.
- Review of country experiences shows that there are tradeoffs between the coverage and generosity of compensation measures and the fiscal savings from energy subsidy reforms that incorporate a cash transfer element, and it is important for practitioners and decision-makers to be aware of them.
- Clear, effective, and targeted communication is key to any transition from universal price subsidies to reformed prices complemented by targeted cash transfers.
- Finally, compensating households through cash transfers alone is not sufficient, and the transfers should be accompanied by other measures to strengthen the resilience of households against shocks.

Some of the specific insights on the design of cash transfers are articulated in subsequent paragraphs.

The stocktaking indicates that cash transfers have come to be a helpful component of governments' policy toolkits while reforming energy subsidies. They can help mitigate the impact of energy price increases on targeted populations and help build trust and support among stakeholders, and thereby facilitate implementation of the reforms. They can be useful as part of a broader, holistic approach to designing and implementing energy subsidy reforms that combines economic, financial, environmental, social, and political considerations, and balances the needs of key stakeholders, including, households, industries, and the government.

Compensation programs supporting energy subsidy reforms need to be developed based on a careful understanding of distributional impacts, sectoral implications, and stakeholder perspectives. While designing the reform efforts, critical steps include understanding who will be affected, the extent to which selected impacts need to be mitigated, and at what cost. In addition to informing the design of compensatory measures, assessment of distributional impacts and stakeholder perspectives can also be a key input into stakeholder engagement and communications efforts. Systematic preparatory work and rollout efforts are needed to streamline the registration and delivery processes, which are critical for uptake of compensatory cash transfer programs.

Although design choices related to compensatory cash transfers depend on specific country and context, preexisting delivery systems are a critical factor for enabling speed and effectiveness of government programs. For example, the decision about whether to create a stand-alone transfer mechanism or build upon an existing one appears to be influenced by the coverage of existing programs. Countries where cash transfers already covered a large share of the target population tended to use an existing system, whereas other countries used a dedicated or separate channel to implement (quasi) universal compensation programs (e.g., 70–100 percent of the population). Benefit delivery channels and payment mechanisms have become more diverse over time, given the increased use of mobile technologies and the variety of digital platforms in the payment ecosystems of many countries. The availability of fit-for-purpose delivery systems—including a social registry with broad coverage, high levels of financial inclusion, and efficient payment channels—can be a key enabler for the cash transfers to reach the intended beneficiaries.

Determining eligibility remains a major challenge in many countries, and this dimension has a direct impact on program uptake and targeting performance. The choice of cash transfer program design and targeting and delivery approach largely depends on the availability and quality of data from different sources, including social registries and other databases. The report embraces a broad and open-minded perspective on targeting, including the selection of beneficiaries based on various criteria (e.g., based on age, welfare, etc.) and yielding a variety of coverage levels. Where targeting is based on welfare dimensions, it is important to note that strict income-based eligibility can still result in exclusion errors, given that people working in informal jobs can lack the documentation to prove their income eligibility. Although some countries used an existing registry to identify

and target beneficiaries, others had to be pragmatic and triangulate data from various administrative databases to reach the target population, taking advantage of established national systems. The ability to communicate, share, and consolidate beneficiary information across databases and platforms can help reduce targeting errors and facilitate identification of beneficiaries that could otherwise have been excluded.

An important conclusion is that the majority of the energy subsidy reform efforts that incorporated cash transfers into their design ultimately generated net fiscal savings. Although the scope of cash transfers can affect net fiscal savings resulting from reform, they are a critical factor in enabling acceptance and implementation of the reform, particularly in the early stages of the transition. It is therefore important to be mindful of the tradeoffs between cash transfer coverage, generosity, and fiscal savings from reform, and consider the balancing act facing policy makers. Depending on the macroeconomic, social, and political circumstances in a country at a given time, one consideration may feature more prominently than others.

Social protection systems, registries, targeting approaches, and institutional capacity need to continue to be strengthened and improved over time to enable their readiness and adaptability to evolving government priorities for reforming energy subsidies. The country experiences reviewed for the global stocktaking exercise highlighted the importance of political commitment, flexibility in design, improving the targeting over time, the use of practical delivery mechanisms, and the upgrading of technical and administrative capacity to facilitate energy subsidy reform implementation.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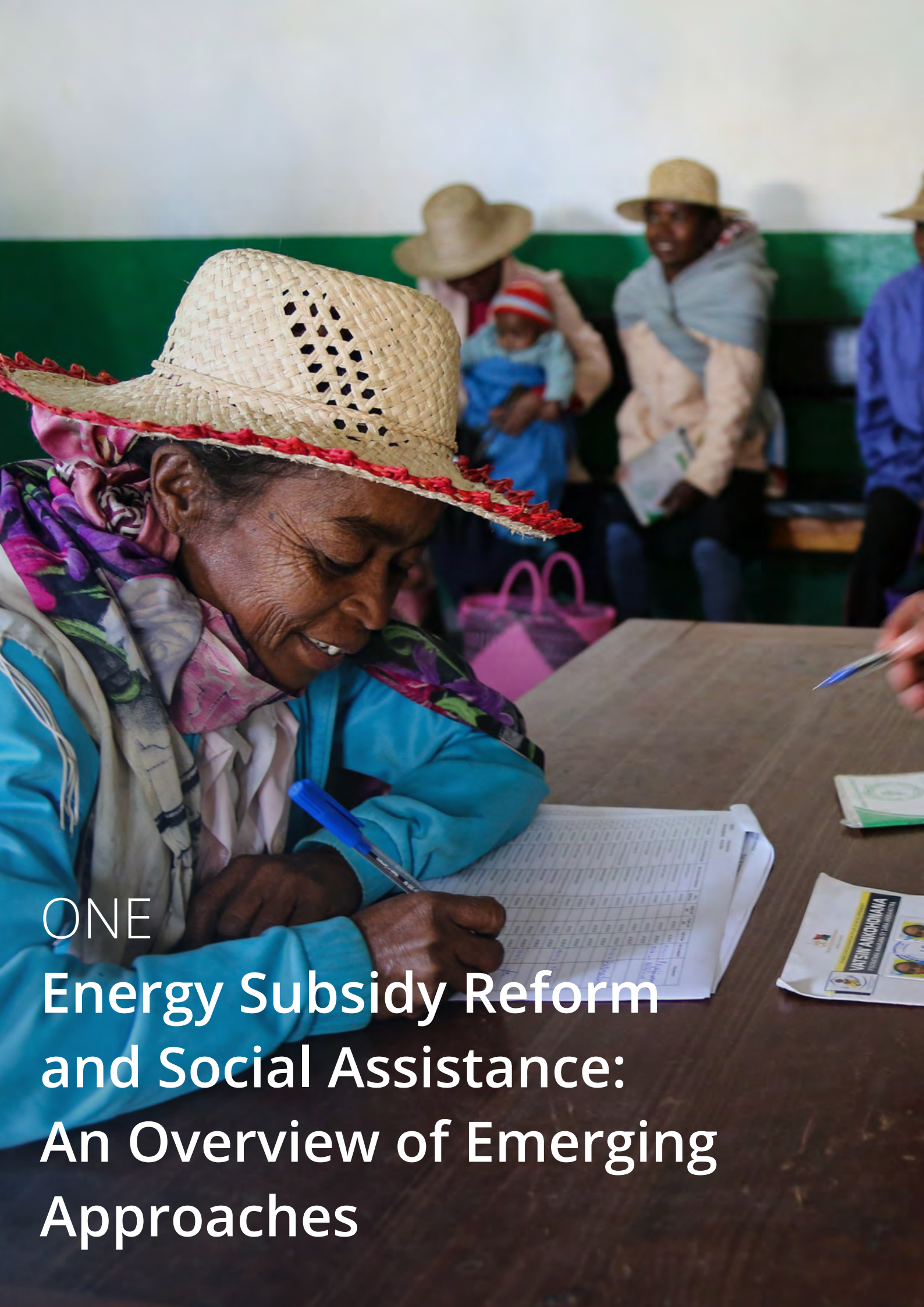
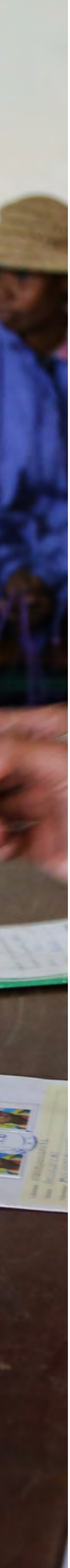


ONE

Energy Subsidy Reform and Social Assistance: An Overview of Emerging Approaches



Subsidies for energy consumption and use—whether direct or indirect—are ubiquitous and have been rising in recent years. In the United States, for example, subsidies have supported the production and consumption of a variety of natural resources and fuels over the past 200 years, from land grants for timber and coal in the 1800s to tax incentives for oil and gas drilling in the early twenty-first century (Pfund and Healy 2011). In the past 50 years, as modern industries have evolved and global standards of living improved, subsidies have increasingly focused on the production and consumption of fossil fuels. The magnitude of energy subsidies is staggering. Globally, budgetary subsidies for fossil fuels and related products were estimated at US$333 billion, or nearly 0.4 percent of global gross domestic product (GDP), in 2015. This amount declined slightly to US$296 billion in 2017, divided almost equally between petroleum and natural gas, and coal (Coady et al. 2019). In 2020, low crude prices and weak economic conditions due to COVID-19 resulted in record low consumption subsidies. However, the amount, estimated at US$180 billion, was still significant (IEA 2021). Energy subsidies rebounded as demand recovered and supply constraints emerged; high energy demand and tight supply conditions put pressure on energy prices, and these pressures were followed by major external shocks, including the Russian invasion of Ukraine, leading to unprecedented high energy commodity prices. These energy price shocks, combined with broader macrofiscal pressures, led governments to announce measures to protect households and firms. Energy subsidies grew rapidly, and as of the end of 2021, total government support to energy production and consumption is estimated to have exceeded US$1 trillion (OECD 2022).

It is widely recognized that energy subsidies have several clear, negative consequences. First, energy subsidies create distortions and have significant fiscal costs, with low- and middle-income countries spending a significant share of their resources on energy price subsidies, be they for gasoline, diesel, kerosene, natural gas for cooking and heating, or electricity. The prevalence of energy subsidies and government commitments to keeping commodity prices low means that supply shocks and the volatility of international energy prices can quickly spiral into fiscal crises, often pushing governments to reform the subsidy regime. Increasing controlled prices makes energy costlier for the general population, which may result in a decline in political support, or even a rise in popular unrest, which governments can find hard to manage. In many cases, however, weak institutional capacity and fiscal mismanagement in the delivery of energy subsidies engender corruption and inefficiency.

A second important negative consequence related to distributional outcomes is that generalized energy subsidies are often inequitable and regressive. Since the early 2000s, a growing body of literature has documented that the benefits of a generalized price subsidy are regressive, captured mostly by those who consume more energy, who tend to be in the higher income quintiles (Anand et al. 2013). However, the removal of universal subsidies without compensation to mitigate the impact can adversely affect poor and middle-income households. Indeed, when countries attempt to reform energy subsidies without adequate accompanying mitigation measures, the impact on households can be significant and can lead to opposition to reform measures. In some cases, the

opposition can culminate in protests, ultimately forcing governments to roll back the reform, undoing months of progress and damaging credibility in the process.

Third, energy subsidies have widespread adverse environmental consequences. Energy subsidies often promote the overconsumption of energy rather than encouraging the saving of energy, and contribute to significant local and global environmental damage (Enriquez, Larsen, and Sanchez-Tirana 2018). Fossil fuels account for about 65 percent of global GHG emissions (IPCC 2014), in addition to air pollution and its health impacts. A recent International Monetary Fund (IMF) working paper projects that raising fuel prices to their efficient levels could reduce global carbon dioxide emissions (Parry, Black, and Vernon 2021). Environmental or "green" taxes[1] most commonly focus on products derived from fossil fuels such as gasoline, diesel, and aviation turbine fuel, among others. Some governments are taking measures to price or tax fuels in a way that accounts for negative externalities from fossil fuel consumption, but doing so is a significant challenge for governments across the world as they attempt to reduce GHG emissions from fossil fuels (Gelb and Mukherjee 2019).[2]

Despite strong evidence of their fiscal costs, economic distortions, distributional issues, and impacts on the environment and climate, energy subsidies remain in many contexts, and their reform continues to be challenging. For governments, the motivation to both subsidize and reform has been shaped by the need to mitigate shocks arising from macrofiscal crises and high (and volatile) global energy prices on the one hand and, on the other, to manage the impact of higher energy prices on consumers, especially the poor. Even with their imperfections, price subsidies for gasoline, diesel, cooking gas, and electricity provide some benefit to the population at large, but more so for politically influential vested interests. It is relatively easy to mobilize multiple stakeholders against energy subsidy reform, which acts as a disincentive for governments to pursue it as a policy priority.

Over the past several decades, the awareness and understanding of good practices in reforming energy subsidies has been evolving. Recent experience shows that, while attempting to address energy subsidies, a holistic approach is essential, as reforms will have varying impacts on fiscal savings, the economy and environment, firms and industry, and households (Flochel and Gooptu 2017). Moreover, to complement price reforms, countries have moved toward compensatory transfers (cash transfers) on a transitional or longer-run basis, and these transfers are usually at least somewhat targeted—conditional or otherwise. Furthermore, many countries have moved to put in place more targeted social assistance, both through conditional or unconditional social assistance. These programs provide governments with existing mechanisms for beneficiary identification,

[1] An environmental tax, commonly known as a "green tax," is "a tax whose tax base is a physical unit (or a proxy of a physical unit) of something that has a proven, specific negative impact on the environment" (European Union Regulation 691/2011).

[2] This report focuses on direct fiscal subsidies. For issues related to externalities, see Kojima (2017).

selection, screening, and payment, which are all essential features of cash transfers for energy subsidy reforms. Despite having such social protection programs in place, several countries opted to provide direct payments for cash transfers instead of using other instruments such as in-kind transfers and vouchers. In several instances, energy subsidy reform and social protection are typically led by different ministries, and the target group and coverage of cash transfers often differ from those of existing social protection programs.

Against this backdrop, the past decade has seen a paradigm shift in how countries implement energy subsidy reforms and accompanying policy measures. This shift involves governments using social protection as an integral part of the reform agenda. Since 2010, a growing number of countries have used cash transfers to compensate part of the population for the increase in energy prices. These cash transfers provide a tangible benefit to individuals and families, and can help build support for subsidy reform, particularly when accompanied by effective communication. The cost of cash transfer programs varies across countries, based on levels of coverage and compensation, from less than 0.001 percent of GDP in Ghana to over 6 percent in Iran. The overall impact depends on both the design and delivery of the cash transfers, making it important to learn from existing cases, successful or otherwise.

The approaches for introducing cash transfers to support energy subsidy reforms have varied across countries and evolved over time. Some countries set up a new program for energy compensatory cash transfers, then continued by expanding it over time, whereas others took advantage of existing social protection programs and leveraged targeting and delivery channels for targeted transfers. For a broad-based cash transfer, in principle, it may be preferable to have an integrated social protection program that delivers support to the population in a coordinated manner, and for different commodities. This approach can avoid inefficiency and facilitate consolidation and coordination of different benefits. However, there may be economic or political reasons—such as ensuring visibility, garnering support for the reform by demonstrating delivery of agreed-on benefits, or budgetary constraints—for separate systems to exist, at least as (possibly quite long-run) adjustment mechanisms. But even these considerations do not necessitate multiple systems for beneficiary identification, targeting, payment, and grievance redressal. Cash transfers can benefit from the coverage and maturity of social protection delivery systems, which can mutually reinforce each other over time as cash transfers become part of social protection. This theme is an important anchor for this report, but also beyond, in thinking about a country's programs and systems in general.

The subjects of social protection and energy subsidy reform took on an added sense of urgency in the context of the COVID-19 pandemic. PolPolicy makers around the world faced a critical challenge: how to maintain fiscal prudence while protecting the lives and livelihoods of all those who were affected by the pandemic. To achieve both of these objectives, it will be important to recognize the synergies between the efficiency of an energy subsidy regime and the expansion of social assistance. Even amid lingering

concerns around the fiscal sustainability of the extensive social protection scale-up during the pandemic, and ongoing inflation, energy subsidies are likely to be back at the center of future social protection financing (Almenfi et al. 2020; Gentilini et al. 2021; Gentilini et al. 2022; ILO 2020).

This report reviews energy compensatory cash transfers implemented globally over the past two decades. The review focuses particularly on low- and middle-income countries where the challenges of energy subsidy reforms are most acute. The report draws on country examples to distill lessons and provide guidance on the role of social protection in supporting the future energy subsidy reform agenda.

1.1 Global Stocktaking: Inclusion Criteria and Typology

To better understand the use of social assistance to support energy subsidy reforms and mitigate the impact of price hikes, a global stocktaking was carried out for this report, aimed at systematically capturing a variety of country experiences. The stocktaking was designed to further explore and document the connection between the two policy domains—energy and social protection—and how the latter has been introduced or scaled up as a result of reforms in the former. This attempt to systematically review energy subsidy reform episodes through a social protection lens can contribute to the fairly limited literature on the subject. By documenting various country approaches to using social protection to complement energy subsidy reform efforts, the review can also help inform policy dialogue in other countries.

The review covers reform episodes that met a set of predetermined criteria. These criteria are outlined below and summarized in Box 1.1.

First, the review includes countries that initiated energy subsidy reforms with specific social protection measures (in particular, social assistance) to mitigate the impact of price increases on households. This includes countries that either introduced new mechanisms or scaled up existing ones to accompany the reform efforts. As such, the stocktaking did not include reform episodes in which no compensatory measures were introduced.

Second, the review considers reform of subsidies for consumption of fuels and electricity. The majority of the reform episodes tackled fuel subsidies, with a few concentrating solely on electricity, or a combination of both. The review also includes lifeline tariffs, which have been used by many countries, especially in the context of electricity subsidies. As indicated in the ESMAP Energy Subsidy Reform Assessment Framework "Good Practice Note 5" (Yemtsov and Moubarak 2018), targeted energy subsidies in the form of

BOX 1.1

INCLUSION CRITERIA, PROGRAM TYPE, AND APPROACHES TO THE DELIVERY OF BENEFITS

Inclusion criteria. To be included in the analysis underlying this report, countries needed to have done the following:

- *Initiated social protection measures alongside energy subsidy reforms.* As such, the stocktaking does not include reform initiatives in which no such measures were introduced.
- *Undertaken reforms between 1995 and 2016.* The stocktaking covers reform initiatives that took place between the mid-1990s and 2016.
- *Included both fuel price subsidies and lifeline tariffs*, the latter mostly to subsidize electricity. The majority of reforms tackled fuels; the rest focused solely on electricity or a combination of the two.

Program type. Cash transfers had to have been conducted as either of the following:

- *New programs that included one-off, temporary, or longer-term measures.* In the stocktaking, 16 initiatives, almost 90 percent of the total, were new cash transfer initiatives.
- *Existing programs that expanded coverage* by, for example, leveraging a general social safety net instrument to cover the poor and vulnerable, or utilizing a universal transfer, depending on the objectives of reform in the country.

Conditionality and targeting. Benefits were delivered through one of four combinations:

Conditional and targeted: Voucher for energy purchase to qualifying beneficiaries

- *Unconditional and targeted:* Cash transfer to qualifying beneficiaries
- *Conditional and untargeted:* Universal voucher for energy purchases
- *Unconditional and untargeted:* Generalized price subsidy or universal cash transfer

vouchers or lifeline tariffs (providing electricity at a reduced price for those consuming less than the "social minimum") are also considered a form of social assistance.

Third, the review explored energy subsidy reform episodes in the roughly two decades from the mid-1990s onward. This period was selected to include a reasonable sample of energy subsidy reform episodes involving cash transfers that met the inclusion criteria, with fairly reliable data available.

After screening based on selected criteria, the focus of the global stocktaking was narrowed down to 24 reform episodes in 18 countries that occurred between the mid-1990s and the mid-2010s (Table 1.1). A few countries had several reform episodes as they attempted to bring energy prices closer to at least their true cost, if not their market value, in phases. Thus, several episodes from one country may be covered in the review. The countries, years, and number of episodes covered are presented in Table 1.1.

Third, the review covers subsidies for consumption of fuels and electricity. The majority of the reform episodes tackled fuel subsidies, with a few concentrating solely on electricity, or a combination of both. The review also includes lifeline tariffs, which have been used by many countries, especially in the context of electricity subsidies. As indicated in the ESMAP Energy Subsidy Reform Assessment Framework "Good Practice Note 5" (Yemtsov and Moubarak 2018), targeted energy subsidies in the form of vouchers or lifeline tariffs (providing electricity at a reduced price for those consuming less than the "social minima") are also considered a form of social assistance.

Although the stocktaking exercise in this report covers the period from 1995, it is worth noting that some countries attempted to include social objectives in reform subsidies as early as the late 1980s. Gupta et al. (2000) undertook a meta-analysis of 28 such energy subsidy reform episodes, which highlighted the need to implement reforms in a gradual manner and recommended introducing well-targeted social protection mechanisms to limit the adverse price impact on the poor and vulnerable groups. It is therefore useful to briefly review the salient design and delivery features that marked the early cases.

The stocktaking exercise follows a consistent set of descriptive categories for each of the countries and episodes included. The information is largely derived from a desk review of relevant literature, complemented by select interviews with World Bank staff who were either directly involved in the reform efforts or have experience and knowledge of the reform episodes. Adapting previous work connecting energy subsidy reform and social assistance,[3] the review uses the following two categories to classify cash transfers: (1) those that were introduced as a new program, and (2) those that were implemented through existing social assistance programs that were expanded to accompany energy subsidy reforms.

[3] Previous work connecting energy subsidy reform and social assistance identifies four different options: (1) introducing new social assistance, (2) expanding the coverage of existing social assistance, (3) increasing the benefit level of existing social assistance, and (4) not utilizing social assistance.

TABLE 1.1

Countries and Reform Episodes Included in the Stocktaking

Country	Year of Reform Episodes*	Number of Reform Episodes
1. Armenia	1999–2000s	1
2. Brazil	2001	1
3. Dominican Republic	2008	1
4. Ghana	2005, 2013	2
5. India	2013	1
6. Indonesia	2005, 2008, 2013	3
7. Iran, Islamic Rep.	2010	1
8. Jordan	2008, 2012	2
9. Kenya	mid-1990s	1
10. Malaysia	2013	1
11. Mauritania	2011	1
12. Morocco	2013	1
13. Nigeria	2012	1
14. Philippines	2008	1
15. Syrian Arab Republic	2008	1
16. Tunisia	2013	1
17. Ukraine	2014, 2016	2
18. Yemen, Rep.	2005, 2010**	2
Total	Between the mid-1990s and 2016	24 reform episodes

Source: Original compilation.
* The year is that of the subsidy reform and not necessarily the same as the implementation or expansion of cash transfers.
** Yemen had another reform episode in 2011 without mitigation measures, which was thus not included in the stocktaking.

What Did the Global Stocktaking Find?

Many countries around the world initiate energy subsidy reforms in the context of fiscal crisis. Several countries reviewed for this stocktaking exercise had an underlying condition of fiscal imbalance (requiring support from international financial institutions), which was worsened by exogenous factors, such as a global financial crisis and volatile oil prices. In fact, 20 out of the 24 energy compensatory cash transfer reform episodes took place between 2008 and 2012—the period marked by the global economic recession and global energy price shock.

In most of the cases reviewed, cash transfers were implemented when price adjustments were fairly significant compared to the subsidized price. Ukraine's experience is at one extreme of the spectrum, with gas prices increasing by nearly six times after the reform was introduced. Even at the lower end of the spectrum, LPG prices increased by nearly 50 percent in the Dominican Republic and India, accompanied by the introduction of a compensation mechanism to mitigate the impact on households.

Program Approach and Coverage

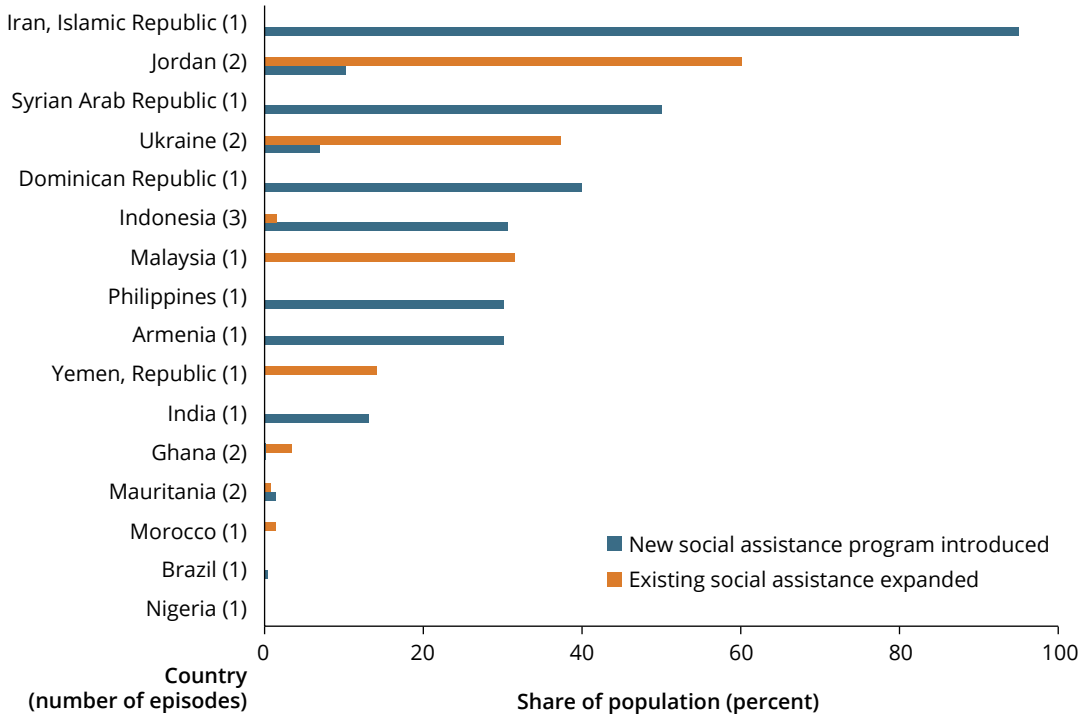
Most of the energy subsidy reforms that used cash transfers did so through new programs. Almost 60 percent of the episodes considered (15 out of 24) centered on new cash transfer programs. In about 40 percent of the episodes covered (9 out of 24), depending on the objectives of reform and the country contexts, governments either scaled up an existing cash transfer program (e.g. Mauritania, Morocco, and Ukraine); leveraged a general social assistance instrument to cover the poor and vulnerable, near-poor households; or transformed the subsidy into a universal transfer. Several countries begun with a new compensatory cash transfer, and then proceed with an expansion of an existing cash transfer program in a succeeding episode (e.g., Ghana, Indonesia, Mauritania, and Ukraine).To further illustrate the evolution of cash transfers, Figure 1.1 plots the type of energy compensatory cash transfers (y-axis) and their coverage[4] (x-axis) for 22 episodes (from 16 countries, out of 24 episodes from 18 countries) for which data were available. A few observations emerge from the country episodes depicted in Figure 1.1.

Coverage of cash transfers varied across the sample reviewed, indicating differences in ambition, resources, and tradeoffs involved across countries and episodes. Nigeria's effort was very limited in coverage whereas, at the other end of the spectrum, Iran's cash transfers were almost universal. Eight episodes fall in the middle of the range (30–50 percent), and four episodes covered between 5 and 30 percent of the population. The remaining 12 cash transfers complementing energy subsidy reform episodes reached less than 5 percent, even after multiple efforts to expand coverage (as in Ghana, Mauritania, and Morocco).

[4] In rare episodes that included a combination of transfers (i.e., cash and noncash), such as targeted subsidies, vouchers, and lifeline tariffs, only the cash transfer beneficiaries were considered in the coverage figures.

FIGURE 1.1

Coverage of Cash Transfers in Energy Subsidy Reforms by Country and Type



Source: Authors' compilation based on data from the International Monetary Fund, the World Bank Group, and the International Energy Agency.
Note: Based on 22 reform episodes in 16 countries for which cash transfer coverage data were available. Newly initiated programs are in blue, and expansions of existing programs are in orange.

Coverage also varied based on energy products or services included in the subsidy reform. For example, Iran's program compensated for an across-the-board increase in energy prices. The price increases included those for gasoline and diesel, which are the commodities most commonly subject to generalized price subsidy at the population level; and the cash transfer program involved broader inclusion criteria. In Ukraine, gas and district heating services were available to nearly all households; consequently, the cash transfer program had high coverage with some targeting.

Program coverage evolved over time in countries that had multiple reform episodes to address changing conditions and reform priorities. For example, Ukraine significantly increased the energy compensatory cash transfer coverage between two episodes. Indonesia achieved only a marginal increase in coverage in three episodes between 2005 and 2013. Iran's cash transfer in 2010 had the largest coverage of the cases studied, initially covering all the population, and later being "downsized" but still benefiting 95 percent of the population. India's LPG subsidy cash compensation program, which is the

largest in the world, is also quasi-universal, covering 265 million beneficiaries—almost 20 percent of the population and 90 percent of all households using LPG. In one country which had multiple reform episodes, cash transfer coverage was scaled up considerably between the first and the second , from 10 to 70 percent of the population, based on the lessons learned from earlier episodes. In contrast to these quasi-universal transfers, most countries target cash transfers to a set of intended beneficiaries, often the poor and the vulnerable most affected by the increase in fuel prices. However, as discussed earlier (Figure 1.1), the actual coverage rate of targeted cash transfers varies, ranging from less than 1 percent to 50 percent. This heterogeneity is due not only to the number of vulnerable people needing assistance but also to budgetary constraints. Although some targeted cash transfers reached about one-third to one-half of a population, nearly half of the transfers reviewed reached a very small segment of the population (less than 5 percent in Brazil, Ghana, Mauritania, Morocco, and Nigeria).

The review finds that cash transfer coverage can be lower (at least initially) when it is provided for a specific and regressive product and targeted to the poor. Cash transfers can be conditional on the purchase of a product or service, which makes them similar to vouchers, or unconditional, which leaves the decision on how to use the subsidy in the hands of the beneficiary. Taking the example of LPG as explored in detail in Kojima (2021), there are four possible combinations for subsidy delivery mechanisms and targeting. Subsidies can be any of the following:

1. **Conditional and targeted:** Voucher to qualifying beneficiaries (most restricted version, requires high implementation capacity)
2. **Unconditional and targeted:** Cash transfer to qualifying beneficiaries
3. **Conditional and untargeted:** Universal voucher
4. **Unconditional and untargeted:** Universal cash transfer, and generalized price subsidy.

The global stocktaking finds that countries that have moved from universal and general price subsidies for energy (Category 4) toward conditional and targeted interventions (Category 1), some over successive reform episodes. There are also countries, such as Ukraine, where progress was not only in one direction—the country moved from a general price subsidy to a targeted cash transfer (Category 4 to 1) but then shifted closer to Category 2 (an unconditional cash transfer) in its design. Similarly, India has tried to reorient LPG subsidies to target the poor (moving from Category 3 to Category 1 over time), which means expanding the beneficiary base to those previously excluded from subsidized LPG access while curtailing the subsidy for higher-income groups at the same time. As of late 2022, India's program covered over 90 percent of India's households—up from less than 50 percent in 2015—including nearly 90 million new beneficiaries reached through the Ujjwala program. On the other hand, In Iran, for instance, generalized fuel price subsidies were replaced with unconditional and untargeted universal cash transfers (Category 4) to support energy subsidy reforms. Iran's program was not fully scaled down, and it remains quasi-universal. Other countries announced objective criteria for the continuation of cash transfers, and in fact discontinued cash transfers when

international oil prices fell below benchmarks set by the government. Overall, such dynamic effects need to be factored into the analysis of energy subsidy reform and accompanying cash transfers, both in this stocktaking and in any future analysis on this topic.

Benefit Level, Structure, and Duration

Energy compensatory transfers varied in their targeting approach, with some targeting individuals whereas others focused on households. In general, countries that have adopted a more targeted approach have used households as the unit, possibly because of information available from existing social protection databases. This could also be because welfare is assessed at the household, not individual, level, noting that the benefit amount to the household can be calculated using the number of household members. The type of fuel also plays a role in determining who benefits. Whereas transport fuels like petrol and diesel are consumed by almost the entire population, subsidies for cooking fuels such as LPG and kerosene typically target households near or below the poverty line. As noted above, India's cash transfer covers almost 90 percent of all households using LPG, while the actual transfer is provided to 265 million people, comprising 19 percent of the country's population. In that sense, the PAHAL program is quasi-universal, just as Iran's "oil-to-cash" transfer was when it was introduced in 2010.

The global stocktaking reveals significant variation in the benefit level or degree of "generosity" of programs. A key question is how much support to provide, and for how long. Governments need to calibrate the transfer size to mitigate the income shock on the one hand and macroeconomic outcomes on the other. This is especially true when a broad-based price reform is inflationary, which erodes the real value of the compensation, as in the case of Iran. This review, however, did not find any instances of inflation-indexed cash transfers, although India comes closest in design through its calibration of the transfer amount according to the monthly import cost of LPG, which is passed on to the household. The government ensured its budgetary allocation of the fuel subsidy, cushioning the impact on the consumer in case of a spike in international energy prices. The case studies in this report show that the income shock alone can be enormous; for example, Ukrainian households experienced a substantial increase—almost double—in energy spending after gas and district heating tariffs were increased by nearly 600 and 200 percent, respectively, in 2015. In the Dominican Republic, prices increased by 52 percent from RD$25 (US$0.77) to RD$38 (US$1.14) per gallon of LPG following the introduction of Bonogas. Qualifying households received a transfer of RD$228 (US$6.84), equivalent to an average consumption of six gallons per month, a significant amount for lower-income households, while at the same time bearing the risk of unexpected price shocks.

Some cash transfers were more generous than others. Some of the most generous cash transfer programs have provided almost half of the average income of the bottom 20 percent of the population or the minimum wage provided by the social protection framework. The benefit level of Iran's universal cash transfer was set particularly high, at

around 30 percent of the median household income. In another country, the energy compensatory cash transfer program provided a fixed level of benefit that was determined based on household size. The calculation of Ukraine's benefit amount was based on a sophisticated formula that used household income, household size, subsistence minimum, and "social norms." India's LPG subsidy was determined on the basis of international prices, giving the government some flexibility to determine the transfer amount while managing the subsidy outlay within the overall annual budgetary allocation determined by the Ministry of Finance. Other large-scale cash transfers have covered at least 10 percent of the population with a benefit level of around 10 percent of the average income of a poor household. The generosity of the cash transfer program may have an effect on the ability to mitigate impacts on households and mobilize support for the reform agenda.

In terms of the duration of the energy compensatory cash transfers, many were one-off or temporary measures whereas others have been scaled back significantly. While curtailing or terminating transfers can lead to reaction from beneficiaries, this does not always have to be the case, especially if plans, milestones, and approaches are communicated clearly and repeatedly by the government. For example, in cases where the government set clear benchmarks at the very outset, the cash transfer phaseout tended to be relatively smooth.

The stocktaking reveals that cash transfer programs mainly identify beneficiaries through a combination of existing and new databases. Countries such as Brazil, the Dominican Republic, Ghana, Malaysia, and the Republic of Yemen have used foundational social registries of individuals and households to identify and target beneficiaries of energy compensatory cash transfers. Depending on program eligibility criteria, beneficiaries have either been added to the existing social registry database (e.g., the Dominican Republic) or to a subset of those in the social registry (e.g., Malaysia). In India, the government consolidated existing information from state-owned LPG distribution companies, creating a unified database that was used to expand coverage of the program while improving the data quality.[5] Indonesia's 2008 and 2013 episodes were built on a database for energy compensatory cash transfers created in 2005, and also leveraged other social protection beneficiary databases.

A country's national ID system has a strong bearing on whether transfers reach their targeted beneficiaries. In one World Bank client country where the social registry was not yet modernized and had limited coverage prior to the reform, the government took advantage of a highly inclusive and functional national ID system to cross-check self-reported income with other existing administrative databases to improve targeting and coverage. Provision of new registration platforms in the context of reform can help identify other citizens who are eligible but not included in existing databases. Iran's universal transfers were also made possible thanks to an almost universal civil registration and national ID coverage, which enabled the government to identify both individuals and households.

[5] In this process, a common LPG ID created by three state-owned companies was then linked to Aadhaar (India's biometric ID system) and each beneficiary's bank account to reduce the chances of fraudulent transactions.

Financing

In all countries included in the global stocktaking, cash transfers were financed through the government budget and booked as revenue expenditure in the system of national accounts. However, none of the countries in this review, except Malaysia, had a specific earmark for energy compensatory transfers, either as a strict budget constraint (reinvesting fiscal savings from energy subsidy reform) or more loosely as a percentage of public expenditure. This leaves open the possibility that commitment to compensatory cash transfers will be fiscally destabilizing in the event of an external price shock. Governments can, therefore, be wary of establishing cash transfers in the first place if the fiscal costs are high and fiscal savings are uncertain.

Several countries have used support from international development partners to finance energy compensatory cash transfer programs. Through their lending instruments, governments worked with international development partners to design such programs and improve the capacity to deliver. In the case of Yemen, the energy compensatory cash transfer program leveraged the Social Welfare Fund database to identify beneficiaries and pay them using its delivery mechanism. A similar approach was followed in Mauritania, where the government set up a targeted household transfer program that provided benefits through a grant from the World Bank. While donor-funded programs can address capacity constraints in low-resource settings, they can also create reliance on external support and entail concerns about long term sustainability of such programs.

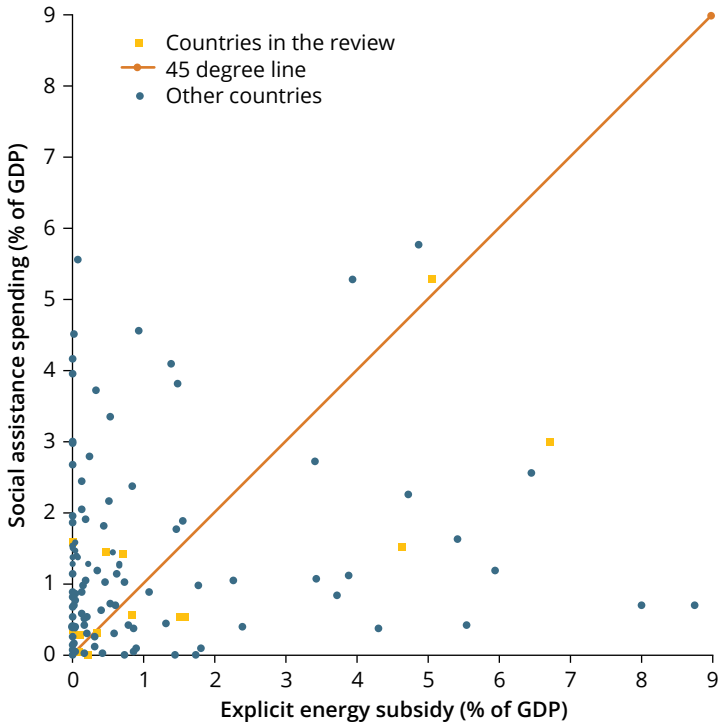
What Are the Fiscal Implications of Energy Compensatory Cash Transfers?

The stocktaking reveals that, at the global level, one-third of countries spend more on energy subsidies than on social assistance. To understand the fiscal implications of energy compensatory cash transfers, figure 1.2 presents data on country-level public expenditure on energy subsidies and social assistance, showing a mixed picture. The analysis uses energy subsidy data for a select set of countries and the latest available social assistance spending for 2021. The analysis finds that out of 115 countries for which comparable data are available, 38 (one-third of the total sample) spend more on energy subsidies than on social assistance, with an average difference of 2 percentage points of GDP. For those that spend more on social assistance, the average difference is approximately 1 percentage point of GDP.

The analysis also points to the challenges and opportunities facing countries as they embark on their energy subsidy reform journey. The analysis reveals there is a big variation among countries, in terms of volumes spent energy subsidy and social assistance. Very few countries spend equally on energy subsidies and social protection, with variations affected by explicit policy preference or historical traditions related to the role of social assistance. Fossil fuel producers in the dataset were observed to spend more on subsidies

FIGURE 1.2

Energy Subsidy and Social Assistance Spending



Sources: Energy subsidy (IMF Energy Subsidy database 2021); social assistance spending (World Bank ASPIRE Database, latest available years for individual countries).
Note: GDP = gross domestic product.

than on social assistance, which may be consistent with interpretations of there being a "social contract" around the broad-based redistribution of natural resource rents (Gelb and Mukherjee 2019; Sadiki 1997).

Of the countries covered in the stocktaking exercise, just over half had energy subsidies that took up a larger share of GDP compared with social spending. The analysis finds that in nine countries, energy subsidies were higher than social assistance spending as a share of GDP. Just under half spent more, with a small set of countries allocating considerably more of their resources to social assistance than to energy subsidies, although their spending level is still relatively low. Ukraine is an interesting case of reforms changing the relative shares of energy subsidies and social assistance in the country's budgetary outlay, which is explored in more detail in chapter 3.

For selected countries, this review compiled more detailed information on pre- and post-reform energy subsidy expenditures and the related cash transfer budget,

instead of social assistance spending, to compare the fiscal savings from reform and the cost of compensatory cash transfers. As shown in Table 1.2, in the column titled "Net Savings," which is calculated as the difference between the pre- and post-reform energy subsidy amount minus cash transfer spending, the results depend on the baseline expenditure, design, and implementation of the reform, including the scope of the social assistance. In this context, the energy compensatory cash transfer also determines the magnitude of fiscal savings.

The majority of the energy subsidy reform efforts generated net fiscal savings, even after using fiscal resources to provide cash transfers as part of the reform. In Indonesia, the 2008 reform was estimated to have saved the equivalent of 1.3 percent of GDP. Subsidies declined from 4.5 percent of GDP in 2008 to 3.2 percent in 2014, while the compensation package, which included cash transfers, was reported to have cost only about 0.5 percent. Later, in 2015, removing gasoline and diesel subsidies in Indonesia freed up about US$15.6 billion to be used in special programs for poverty eradication and human development, infrastructure development, and social welfare programs such as assistance to poor students and cash transfers. In another example, the Arab Republic of Egypt has been reforming energy subsidies since 2013, when fossil fuel subsidies were the equivalent of 7 percent of GDP, and has gradually been freeing up resources to support other sectors such as health and education.[6] However, it is important to note that fiscal savings from energy subsidies may not necessarily lead to an increase in social assistance expenditure even after repeated energy subsidy reform episodes, unless deliberate action is taken. In countries which were able to convert fiscal gains from energy subsidy reform into a structural reform of social assistance there may be an improved opportunity to reap long-term benefits in terms of both efficiency and equity, as seen in several countries (Kojima 2022; Lindebjerg, Peng, and Yeboah 2015; Mittal, Gelb, and Mukherjee 2017).

The fiscal cost of the cash transfers varied according to the coverage and generosity of the compensation mechanism. For example, in Iran, where the coverage rate is high and transfers are generous, cash transfers are the equivalent of nearly 6.5 percent of GDP. Ukraine's case is similar but with a lower baseline subsidy and cash transfer cost. In India, the cash transfer design allows the government to vary the benefit level dynamically depending on prevailing reference international prices for energy commodities and budgetary constraints. In the Dominican Republic, the compensation level has been stable over a long period, which provides a measure of predictability for both government and household budgets while at the same time shifting the burden of price shocks to the latter. Finally, phasing out cash transfers allows governments to lock in fiscal savings but can also lead to popular opposition (as seen in Iran). There are visible tradeoffs between political cost and fiscal benefit when decision-makers determine coverage and generosity of cash transfers.

[6] Egypt has been providing cash to low-income households through its first conditional cash transfer program—Takaful—and Karama, a social protection program run by the Ministry of Social Solidarity, since March 2015. Takaful ("solidarity") supports poor families with children under 18, while Karama ("dignity") supports the elderly poor and people living with disabilities. The cash transfer program has enrolled 2.25 million families across all of Egypt's governorates (Breisinger et al. 2019).

TABLE 1.2

Energy Subsidy and Compensatory Transfer Expenditure as a Share of GDP (%)

	(1)	(2)	(3) = (1) – (2)	(4)	(5) = (3) – (4)
	ENERGY SUBSIDY			CASH TRANSFER FOR ENERGY SUBSIDY REFORM	NET SAVINGS
	PRE-REFORM	POST-REFORM	DIFFERENCE		
Dominican Republic*	6.4	2.5	3.9	1.2	2.8
Ghana	3.2	0	3.2	0.4	2.2
India			0.118	0.177	−0.058
Indonesia	4.5	3.2	1.3	0.5	0.8
Iran, Islamic Rep.	14.4	12.6	1.8	6.5	−4.7
Jordan*	5.8	2.8	3.0	1.5	1.5
Kenya	1.5	0.0	1.5	0.4	1.1
Malaysia	2.9	1.9	1.0	0.5	0.5
Morocco	6.5	3	3.5	1.0	1.2
Nigeria	4.7	3.6	1.1	0.3	0.8
Philippines	1.5	0.0	1.5	0.0	1.6
Syrian Arab Republic			7.6	4.5	3.1
Ukraine*	6.9	1.4	5.5	2.8	3.4
Yemen, Rep.	8.2	7.2	1.0		1.0

Sources: Global Stocktaking Matrix, based on data from the IMF, the World Bank ASPIRE database, and country sources.
Note: For Syria and India, only information on net savings from the reform is available.
* Case study countries.

Net fiscal savings vary significantly across countries. As shown in Table 1.2, in 9 out of 14 countries for which comparable data (i.e., fiscal data) are available, fiscal savings reached 1 percent or more of GDP in the period immediately following implementation of the reform. Some achieved it even with wide and generous transfer coverage, particularly where pre-reform subsidy spending was high. For example, in a country that completely removed petroleum subsidies, those subsidies absorbed 3 percent of GDP, while the cost of quasi-universal transfers after the reform was only about half that level. In the

Dominican Republic, the budget requirement for the new targeted subsidies was only 26 percent of the pre-reform general LPG price subsidies.[7] However, some reform gains may erode over time, either due to commodity prices changes or political pressures that led to a rollback of reform measures. After reforming energy subsidies, Ukraine ended up largely expanding the social assistance programs, with the budget exceeding 2.5 percent of GDP by 2017, which then informed new social protection reforms.

1.2 Lessons from the Global Stocktaking

Much has been written on energy subsidy reforms since these early efforts, and the foundational lessons are still relevant (Gupta et al. 2000; IMF 2013). Although select reform episodes have successfully generated fiscal savings, ranging from just over 5 percent of GDP for Ukraine to over 1 percent for Indonesia, the net savings are lower if the cost of the cash transfer for energy subsidy reforms is factored in. There is also a tradeoff between the objective of reducing the fiscal burden of energy subsidies and the level and coverage of the cash transfer, as can be seen in Figure 1.3. These are difficult political economy choices that policy makers face as they try to mitigate supply shocks and reduce the impacts on the population at large. To manage the impact on the population, and political risks, many countries adopt a gradual approach to reform that places a premium on people's trust in the government's ability to deliver on its promises. As widely recognized in energy subsidy reform literature, a well-designed communications strategy supported by improvements in transparency, accountability, and governance is an important element of the long-term success of the energy agenda.

Moving from a universal price subsidy to a market based price of energy, that is reflective of efficient costs. The questions that policy makers have to consider are numerous. What other elements should be included in a reform package and its implementation plan to support success? What lessons can be learned from countries that have implemented cash transfers to support such reform measures? How can transfers to individuals be integrated into social assistance and the broader social protection framework, especially for countries that are in the process of structural transformation from fossil fuels to clean energy? How can a government build effective coalitions to garner public understanding of potential price increases? Although the key lessons are interlinked, they can be classified into three broad categories as the importance of (1) design and financing of cash compensation programs, (2) payment mechanisms and delivery channels, and (3) aligning reform design with the political economy context.

[7] The general LPG price subsidy amounted to 0.5 percent of GDP, while the budget for new targeted subsidies was 0.13 percent of GDP in 2018.

An overarching conclusion is that targeted measures to protect the poor need to be an integral part of the reform design and implementation strategy. Social protection mechanisms must be established before the reforms are initiated. However, the global review shows that there is an emerging diversity of experiences, ranging from leveraging existing social assistance platforms to rolling out energy compensatory transfers at scale. This review finds that carefully designed and well-targeted cash transfers can mitigate the impact of higher energy prices on the most affected population segments, particularly poor households. These lessons are explored in detail below, drawing from the global stocktaking and country case studies discussed in Chapters 2–4.

Design and Financing of Cash Transfer Programs

When developing a reform initiative, policy makers have a series of decisions to make on key design parameters related to the scope of energy subsidy reforms as well as compensatory cash transfers. Key design parameters include the coverage and amount of the compensatory cash transfers, which in turn inform the fiscal implications of reform and the scope of supporting measures to facilitate the transition. While this report's global stocktaking presents some stylized facts and trends, it also demonstrates that there are no easy decisions—there are always tradeoffs between coverage, generosity, and fiscal savings when moving from generalized universal price subsidies to individualized transfers, combined with other programs to support affected livelihoods.

Once the key reform parameters are set, the next question is how to implement the reform. Moving away from generalized price subsidies to cash transfers requires significant upgrading of implementation capacity and delivery mechanisms, such as beneficiary identification, enrollment, payments, and feedback. From an administrative point of view, cash transfers are similar to social protection programs that transfer monetary benefits—such as pensions, child support grants, scholarships, or conditional cash transfers—to a set of eligible beneficiaries. Most governments have preexisting payment mechanisms in place either under a ministry or department, or a specialized agency that pays social protection beneficiaries as its sole responsibility (as in the Dominican Republic, for example).

Targeting, Beneficiary Identification, and Eligibility Criteria

One of the first questions when designing a compensatory cash transfer is to whom to provide benefits. Considering that pre-reform price subsidies for fuel are typically universally applicable, there are indications of the potential usefulness of quasi-universal cash compensation as an immediate transition measure. The coverage of the cash transfers can be designed over time. Large-scale cash transfers can be rationalized over time by progressively targeting the poor and vulnerable, who would require continued support to cope with a longer-term increase in energy prices.

A related consideration is how to identify the target population. The stocktaking reveals that several cash transfer programs identify beneficiaries by using best available data, mainly through a combination of existing and new databases. Existing databases account for certain parts of the target population, but they are not always unified, and they are hosted by different ministries. This makes data consolidation and sharing difficult without a proactive national effort to develop a unified registry. Depending on program eligibility criteria, beneficiaries can be added to the existing social registry database (e.g., the Dominican Republic) or to a subset of those in the social registry (e.g., Malaysia). However, existing databases do not fully respond to the requirements of compensatory cash transfers at a large scale. To address this limitation, governments can explore consolidating existing information from different sources to create a unified database. A country's national ID system has a strong bearing on whether transfers reach their targeted beneficiaries. There is significant potential to improve beneficiary identification by leveraging digital technologies, including digital ID and interoperability.

In some countries, databases built for compensatory cash transfers have had both legacy and spillover effects on succeeding reforms. Especially in reform efforts where compensatory cash transfers reach a larger share of the population than regular social assistance cash transfer programs, the energy subsidy reforms provide a unique opportunity for countries to develop more unified and adaptive systems. Indonesia used its 2005 program beneficiary list to rapidly roll out its 2008 and 2013 reforms. A country which developed compensatory cash transfer database for fuel price reforms later used the same database for a later reform of prices of other commodities. Similarly, the Dominican Republic's Bonogas laid the foundation for transforming its electricity subsidy through the Bonoluz cash transfer program.

Determining eligibility remains a major challenge in many countries, and can affect program uptake and the distribution of benefits. As noted earlier, to identify the target population based on welfare criteria, the choice of targeting approach depends on the availability of existing databases and systems in the country. For example, some countries already have national poverty targeting systems and social registries for the target population (e.g., Sistema Único de Beneficiarios [SIUBEN] in the Dominican Republic) that can be leveraged. On the other hand, other countries relied on combinations of self-reporting and existing administrative databases to improve targeting.

Even when the targeted cash transfers aim to prioritize the poor and the vulnerable, strict income-based eligibility can result in exclusion errors, where the poorer segments of the population find it more difficult to prove eligibility than the higher-income groups because of informality. Countries such as Morocco have used categorical targeting (e.g., focused on widows, the physically disabled, and school children with a high dropout risk) to transfer benefits, making the compensatory cash transfer closer to a general social protection measure but with low coverage. In Yemen, households' eligibility for energy compensatory cash transfers depends on their inclusion in the Social Welfare Fund. Although this model provides a convenient identification and verification

mechanism, it can also lead to the exclusion of genuine beneficiaries if the underlying database is weak or out of date.

The case studies show different trajectories for targeting performance of cash transfers, based on coverage rate and approach adopted. Ukraine achieved more progressive energy-related social programs over time, mitigating the impact of increased tariffs on the most vulnerable households. In many countries, targeting performance depended on the efficiency and equity of the existing targeting mechanisms. For example, in the Dominican Republic, beneficiaries of energy compensatory cash transfers were initially selected using the existing national poverty targeting system based on transparent eligibility criteria.

Moving from an opaque universal price subsidy to a more transparent system of targeted direct transfers provides an opportunity for governments to reduce the chances of missing or duplicate beneficiaries. This can be a source of significant savings, as seen in the case of India. There, the introduction of the LPG subsidy reform was accompanied by the verification of beneficiary lists that unearthed nearly 25 million suspect subscriptions (nearly one-fifth of the total), most of which were terminated. New subsidized benefits were issued on the basis of Aadhaar, India's biometric ID, and linked to a bank account to ensure only genuine beneficiaries were included in the system.

Payment Mechanisms and Delivery Channels

To deliver compensation, governments have the option of creating a stand-alone transfer mechanism or using an existing one. This stocktaking indicates that a cash transfer program's scale in relation to the coverage of existing programs is a key determinant of the choice. A dedicated transfer channel is preferred for compensation programs with greater coverage (e.g., 70–100 percent); Indonesia, Iran and the Philippines are some of the countries that fall into this group. On the other hand, countries with existing conditional cash transfer or social assistance programs that cover much of the target population have often used existing channels, either through a named energy compensatory cash transfer program (e.g., the Dominican Republic used Solidaridad for Bonogas and Bonoluz; Brazil used Bolsa Familia for Auxilio Gas) or as a top-up to the existing payment (as in Malaysia and Yemen). India used a combination of the two—it initiated a dedicated energy compensatory cash transfer program for LPG subsidies and used the Direct Benefit Transfer payment platform to pay beneficiaries.

In principle, a dedicated payment channel can provide flexibility with respect to the amount and frequency of the transfers, but it may not be the most efficient use of resources. Beneficiaries are aware of the purpose of the transfer as well as their benefits, which can help build support and improve accountability for the reform process overall. At the same time, when available, using existing systems enables rapid rollout and scale-up of energy compensatory cash transfers without the need to create parallel processes. Key building blocks—communication, identification, registry, payment, and a feedback

mechanism—can be retrofitted and repurposed in most cases. These are discussed in greater detail below.

The global stocktaking reveals several payment modalities for cash transfers. Beneficiaries can receive cash transfers through their utility bills, as vouchers, or through various payment modalities, which have become more diverse over time thanks to the evolution of payment platforms and mechanisms. For example, Ukraine initially delivered benefits using discounts on utility bills, but moved to direct cash transfers as the reforms progressed. Brazil, the Dominican Republic, and the Syrian Arab Republic moved from gasoline vouchers to prepaid cards that helped improve efficiency and reduce leakage while expanding the digital payments network at the same time. India's program focused on LPG for cooking uses the Direct Benefit Transfer platform for government-to-people cash transfers. This provides flexibility for the use of bank accounts that may or may not be linked to Aadhaar, India's biometric ID database. Countries have thus been open to making the transition to new systems to improve delivery and payment mechanisms that are fit for purpose.

Well-functioning cash transfers can engender both legacy and spillover effects, including but not limited to financial inclusion. Iran's universal transfer was made possible through a coordinated effort to open bank accounts and expand the branch network, which significantly improved access to financial services for both men and women. The proportion of the population over 15 years of age having a bank account increased from 74 percent in 2011 to 92 percent in 2014, and the gender gap halved from 12 percent to 6 percent in the same period (Findex 2017). However, it is important to note that although digital payments can facilitate greater speed and efficiency of transfers, they also require certain levels of digital literacy and capacity that may unexpectedly lead to the exclusion of the poor—to the detriment of a reform's objectives. In another example of cobenefits from energy subsidy reform efforts, the provision of LPG as a cleaner cooking fuel in India helped reduce indoor air pollution and the incidence of pulmonary tract infections among women—a good illustration of positive spillovers in terms of better health outcomes for a large segment of the population.

Feedback and Grievance Handling

With appropriate design and effective implementation, governments can minimize the exclusion of genuine beneficiaries as they roll out and scale up cash transfer programs. With the knowledge that such exclusion is possible, grievance redress mechanisms give voice to the people and a channel for administrators to obtain information about on-the-ground realities. The quick resolution of issues is critical for cash transfers, as is government accountability (Mittal, Gelb, and Mukherjee 2017). It is also important to have a two-way communication flow in place—actively seeking beneficiary experiences in addition to delivering program messages—and to use the feedback for course correction.

The scope of feedback and grievance redress mechanisms varied across the country experiences reviewed as part of the stocktaking, ranging from more traditional approaches to more sophisticated ones. Establishing an accountability mechanism to address errors and delays and undertaking follow-up action are key factors that demonstrate commitment and garner support for energy compensatory cash transfer reforms. While it is relatively rare, certain mechanisms specifically adopted for energy subsidy reforms do more to measure the quality of services and beneficiary satisfaction. For example, India's LPG reform included a real-time dealer rating option—a sort of customer satisfaction feedback loop—building upon existing digital infrastructure (Gelb, Mittal, and Mukherjee 2019). Customer ratings were directly linked to the performance evaluation of dealers, including contract renewal or termination as well as rewards, thereby reducing the number of low-performing service providers over time.

Digital systems, including digital grievance redress channels and social media, can be a powerful tool for improving the quality of feedback mechanisms. Governments have the opportunity to strategically use grievance redress mechanisms to support the targeting and delivery of energy compensatory cash transfers and integrate the mechanism into program outreach and communication efforts from the outset—not as an afterthought.

Aligning Reform Design with the Country Context

Although strong political commitment is a key driver of energy subsidy reforms, policy strategies vary according to underlying political economy conditions. Managing the political economy is often a key challenge in the context of energy subsidy reforms. There is a growing body of literature on the political economy of countries that have successfully implemented energy subsidy reforms (Ciminelli et al. 2019; Inchauste and Victor 2017), which provides relatively consistent guidance on the set of policy choices and implementation options. The policy choices and implementation strategies have to be country specific, and they can be informed by regional or global factors. When energy subsidies are significant and ultimately unsustainable, price adjustments needed to bring the sector closer to recovery of efficient costs can be large, especially when prices have been held steady for extended periods while commodity prices rose. These cases can be particularly sensitive for policy makers with the will to undertake reforms.

International experience suggests that the scope, timing, and pace of energy subsidy reforms are crucial. The timing and sequencing of reforms matter. One cross-country review finds that reforms tend to have more significant political costs for decision-makers when they are implemented in the run-up to elections rather than early in the term of an administration (Ciminelli et al. 2019). Similarly, attempting to reform energy subsidies during a crisis can sometimes result in discontent or opposition. A recent paper that reviews a sample set of energy subsidy reform episodes highlights 41 countries that experienced at least one incident of protest directly associated with fuel prices between 2005 and 2018 (McCulloch et al. 2021). However, this does not mean that energy subsidy reforms are always bound to be met with protests. Some of these risks can be overcome

by a well-designed energy subsidy reform initiative—one that is designed based on an assessment of potential impacts on various stakeholders and with the active engagement with those stakeholders, that incorporates mitigation measures to address the anticipated impacts into its design, and the implementation of which is carefully sequenced. Gradual reforms accompanied by effective communication and adequate compensation mechanisms appear more likely to be successful, especially if implemented during favorable economic conditions rather than during periods of economic crisis (IMF 2013).

Fiscal incentives and social assistance to support those most affected can help mitigate some of the political economy risks, opening the policy space for structural reforms (Ciminelli et al. 2019).[8] As different country experiences show, the design of a compensatory transfer regime, whether universal or targeted, needs to involve careful consideration of who will be affected and determine the extent to which any impacts need to be mitigated. A related critical factor is engaging with stakeholders early on to articulate the rationale for immediate action and build trust and support for reform. In the different cases reviewed for the global stocktaking, particularly the Dominican Republic, Indonesia, Iran, Tunisia, and Yemen, energy compensatory cash transfers were introduced to mitigate impacts and were helpful in gaining public support for reforming subsidies to address fiscal costs

Communication and Stakeholder Engagement

Although it is not possible to control for all political economy risks, well-planned and meaningful stakeholder engagement and communication can help a government explain the rationale for energy subsidy reform to key constituents. This engagement is especially necessary where the preexisting subsidy regime benefited a significant segment of the population, which is often the case for gasoline, diesel, LPG, and electricity subsidies. Ukraine provides a good example of strategic communication regarding the rationale for reform, where the government managed to pursue critical energy subsidy reforms in a highly challenging setting through evidence-based, effective communication. In a separate, but related approach, the Government of China's current high-level ownership of its commitment to net zero emissions is well communicated through all media channels and is well understood by the public. In a few cases reviewed for the stocktaking, governments deployed public opinion surveys to better understand citizens' perspectives, and used those to inform the design of the communications campaigns and messaging. In some of these, top leadership of the government made concerted efforts to directly communicate the rationale for reform to citizens and civil society, conveying the urgency of reforming subsidy structures that benefited the rich more than the poor.

The way a government communicates its commitment to providing compensatory cash transfers and articulates the need for reform, its objectives, and the expected outcomes plays a critical role in reform preparation and implementation. Country

8 For a discussion of the impact of austerity measures on electoral outcomes, see Alesina et al. (2021).


Programme
Alimentaire
Mondial
Carte d'assistance humanitaire
MANCHESTER
CITY
AIRWAY
500

examples highlight the importance of developing messaging to set clear expectations, articulating end results (e.g., "if you do X, you will receive Y amount on Z date"), and delivering them via multiple channels using both traditional and social media. Continued engagement through program implementation can also be useful. In Iran, beneficiaries who completed the required processes received their transfers in advance of the fuel price increases and regular monthly payments thereafter. In India, LPG cooking gas beneficiaries receive the subsidy within a few hours of the refill delivery, with a mobile text message alerting them of the transfer.

Effective communication can significantly increase the uptake of energy compensatory cash transfers, ensuring the inclusion of the target populations and fulfilling the objective of mitigating the impact of reforms on the poor and vulnerable. For example, India's use of social media and mobile messaging platforms helped spread awareness of the application process and nudge recipients to opt out of the subsidy. In Indonesia, the government's strategic communication campaigns in conjunction with compensatory transfers seem to have helped explain the relatively smooth implementation of the 2013 and 2014 reform episodes. To address the low uptake of energy compensatory cash transfers in the 2014 reform episode, Ukraine undertook a large-scale survey to understand the constraints beneficiaries faced in accessing the transfers and rolled out an information campaign in response. This effort resulted in a massive expansion of social assistance from just over 1 million households in 2014 to nearly 7 million in 2016.

The case studies that follow summarize specific reform episodes from the Dominican Republic and Ukraine to highlight different approaches to using targeted social protection to support energy subsidy reforms. Together with the global overview, these case studies can provide insights into what works, and why, for cash transfers and compensation measures that have supported energy subsidy reforms—both successful and otherwise—over the past two decades. They also offer considerations for future agenda items beyond cash transfers, including the need for a whole-of-government approach, greater alignment of the energy sector and social protection systems, structural transformation that involves creating new economic opportunities, and transition to a green economy. Since these cases are covered in greater depth in recent publications or World Bank project documentation, the experiences are summarized to capture the main elements, there after focusing on elements that have not been systematically treated elsewhere, in order to provide details that may be useful for practitioners.

TWO

The Dominican Republic: Leveraging Social Assistance for Energy Compensatory Transfers (2004–12)

This case study focuses on the introduction of energy compensatory cash transfers in the context of successive energy subsidy reform episodes that took place in the Dominican Republic between 2004 and 12. This section summarizes the context, introduction and evolution of two key energy compensatory transfer programs. The case study focuses on the early years of these programs when key design choices were made and refined, and programs were scaled up. As such, this section is not intended to be an up-to-date record of the latest status of the sector, but rather an account of how the government introduced social protection in the context of energy subsidy reform. The government of the Dominican Republic has since continued to refine and strengthen the design, coverage, targeting and delivery approaches of both programs beyond the specific period chosen for this case study.

The Dominican Republic undertook a series of energy subsidy reforms over nearly two decades. Through successive reform episodes, the country moved from a generalized price subsidy for LPG and electricity to a system of targeted transfers covering nearly 40 percent of all households in the country. The government used Solidaridad, the broad-based social assistance system introduced after the banking crisis of 2003–04, infrastructure to deliver Bonogas and Bonoluz conditional cash transfers after they were initiated in 2008. The government leveraged Solidaridad beneficiary database to target energy transfers to the most vulnerable households, which had already been identified. At program outset, a broad beneficiary base was chosen, relaxing the eligibility criteria to include the middle class. More recently, the government took steps to improve the targeting of beneficiaries under Bonogas and Bonoluz. Two targeted energy compensatory transfer programs—Bonogas and Bonoluz—have now been in place for more than a decade, largely consistent with their original forms, but with gradual strengthening of design, targeting, and compensation approaches, based on implementation experience. The energy subsidy reform experience in the Dominican Republic is a good example of converting macrofiscal challenges into opportunities, and sustained progress even in challenging circumstances.

2.1 Context: Fiscal Crisis, Subsidy Reform, and Their Aftermath

The Dominican Republic experienced a period of sustained economic growth from the early 1990s on. The government pursued prudent macrofiscal policies, and the economy benefited from relative stability of international commodity prices. Annual economic growth averaged 5.7 percent from 1995 to 2013 (the second-highest rate in the Latin America and the Caribbean region after Panama). Average income increased by nearly 50 percent over the two decades. The poverty rate increased from 8.1 percent in 2000 to 10.0 percent in 2013, reflecting the long-term impact of the disruption caused by the

banking crisis of 2003–04, which is discussed below (Inchauste and Victor 2017). From the early 2000s, the provision of energy subsidies created a large fiscal burden on the exchequer. The government policy involved providing relatively cheap LPG to households and the transport sector, keeping electricity tariffs artificially low, and covering losses of the state-run utility through the government budget.

The period of economic growth came to a halt in 2003, when the country Dominican Republic experienced a severe banking crisis brought about by the collapse of Banco International, the second-largest financial institution in the country, which in turn triggered a wider economic and political crisis. The economy contracted by 0.3 percent, the currency was devalued, inflation quadrupled, and poverty rates increased to 20 percent. By 2004, electricity subsidies were the equivalent of 2 percent of GDP. As part of its program of actions to tackle the macrofiscal crisis, the government committed to halve the fiscal deficit, rationalize energy subsidies, and set up targeted social assistance. In 2003, the government initiated a conditional cash transfer program, *Solidaridad*, which would target households identified through a means test, and gradually expand coverage. The government also carried out a series of reforms across the economy, including in the electricity sector. Although significant progress was made, the 2004 reforms did not fully address the underpricing of fuel and electricity consumption for the population at large.

The country managed to weather the immediate impact of the financial crisis in 2008, thanks to strong macroeconomic fundamentals. However, the rise in energy commodity prices in the years that followed started impacting macrofiscal balances. After declining to 1.2 percent in 2007 electricity subsidies increased sharply to 2.7 percent of GDP in 2008 when the Dominican Republic was hit badly by the global financial crisis (Vagliasindi 2012). Natural gas subsidies were estimated to correspond to about 0.5 percent of GDP in 2008. The energy subsidy burden grew further in the years that followed, reaching nearly 2.5 percent of GDP in 2010, contributing to an expanding fiscal deficit (Inchauste and Victor 2017). The continued volatility in energy commodity prices, and the corresponding large and variable fiscal burden, made it clear that the government had to address fuel subsidies, whose elimination could affect a large segment of the population without adequate mitigation.

It was in this context that the Dominican Republic's move from generalized price subsidies to targeted energy cash transfers—Bonogas and Bonoluz—took place. Using Solidaridad's delivery infrastructure, the government decided to initiate cash transfers to households (Bonogas-Hogares) and set up a separate program to compensate public transport contractors (Bonogas-Choferes). This effort was followed by a rationalization of electricity tariffs in 2012, at which time compensation started to be transferred directly to users through the Bonoluz program. All other forms of energy support, except for Bonogas and Bonoluz, were eliminated. The compensation mechanism is discussed in the following subsection.

2.2 Integration of Compensatory Transfers in Energy Subsidy Reforms—Bonogas and Bonoluz

Although different options for reforming energy subsidies were attempted since the early 2000s, including periodic price adjustments, taxation, vouchers, and others, they did not significantly impact energy subsidies. There was a change in institutional roles for energy subsidy delivery following the banking crisis of 2003–04, when the responsibility for energy subsidy management was transferred from the Ministry of Industry and Commerce to the Social Cabinet. This institutional change is credited by some commentators as contributing to the adoption of compensatory transfers, and the implementation of the energy subsidy reform program effort as an integral part of social assistance, using the existing Solidaridad platform.

Further detailed description of the energy subsidy reforms is provided in Inchauste and Victor (2017), World Bank (2018) and World Bank (2022). The rest of this case study focuses on program design, implementation, arrangements and impact of compensatory transfers using a social protection lens and draws lessons from the Dominican Republic's experience for other countries undertaking their own energy subsidy reforms.

Mechanism Design

Bonogas transfers were divided into two components—Bonogas-Hogares, which targeted households, and Bonogas-Choferes, which provided subsidized fuel allocations for transport operators. This approach helped focus the transfers on key groups that stood to be affected by reforms and these impacts would need to be addressed as part of the reform effort.

While the Bonogas-Hogares was closely integrated with the social protection system targeted to households, creating a separate targeting mechanism dedicated to commercial users helped deliver support to different segments of the economy efficiently and equitably.

Another design feature was the use of an existing conditional cash transfer platform to integrate an unconditional program (Bonogas), where recipients did not need to comply with any conditions to receive the transfers. This approach was facilitated by the automatic inclusion of all existing Solidaridad beneficiaries (vertical expansion) and by adding new households that qualified for the Bonogas transfers per the requirements of the program (horizontal expansion). The main criterion used to include new beneficiaries was that they were categorized as poor or extremely poor based on the social registry (SIUBEN, see below).

Two other factors contributed to the design of Bonogas, leveraging existing social protection delivery systems. First, the Solidaridad program created a database of unique

beneficiary households (SIUBEN), which itself leveraged the wide coverage of the Dominican Republic's national ID system. Solidaridad is an agglomeration of different programs with different beneficiary subsets that are all registered in SIUBEN. The earliest program, Comer es Primero, was started in 2005 to mitigate the impact of the banking crisis on an increasing number of poor households; others, such as an education scholarship program (Incentivo a la Asistencia Escolar), were added subsequently. Thanks to SIUBEN and this modular approach, the Social Cabinet was able to add the Bonogas and Bonoluz programs to the same social protection platform. Second, an existing payment mechanism—a VISA-branded debit card widely accepted by a large number of retailers—was used for Bonogas transfers (approximately US$4 per month). Existing beneficiaries received a top-up Bonogas transfer to their regular receipts from the Solidaridad program (approximately US$15–US$19). The same mechanism was replicated for new beneficiaries, and only additional households needed to be onboarded separately.

The same strategy was followed for Bonoluz—effectively reducing delays in identification, onboarding, and payments once the policy was determined by the government—and thus is not discussed here in detail.

Implementation

As with all social protection schemes, the success of energy compensatory transfers depends largely on how they are implemented. Overall, the Dominican Republic managed the transition well. Building on a sound mechanism design, the government managed to roll out Bonogas transfers to households in a relatively short period. Starting in late 2008, Bonogas transfers were rolled out rapidly to existing Solidaridad beneficiaries, followed by additional categories, that is, those in moderate poverty or the lower middle class.

Using an existing institution, the Social Subsidy Administration (or ADESS), helped streamline the identification and onboarding of recipients and the payment of Bonogas transfers. A communication strategy was adopted and implemented through the Solidaridad program to explain the one-time top-up from Bonogas to existing beneficiaries. Since its inception in 2005, ADESS has been able to deliver social transfers efficiently and thus earn people's trust. As noted above, its exclusive mandate and oversight by the Social Cabinet meant that its implementation was subject to the same level of monitoring as existing social programs, with high political visibility. This visibility is credited with ensuring better policy coordination, accountability, and transparency, in addition to streamlining processes both within and across different government departments.

Through this reform effort, the government was able to manage both internal and external political economy constraints and create the policy and fiscal space to undertake more difficult reforms, especially in the electricity sector. The efficient implementation of Bonogas enabled it to fulfill the government's commitment to bring down the fiscal deficit, demonstrating its capacity to carry out difficult reforms and helping strengthen its credibility. Transforming general price subsidies into social transfers provided the opportunity to seek support from international financial institutions to expand social assistance.

2.3 Results and Impact

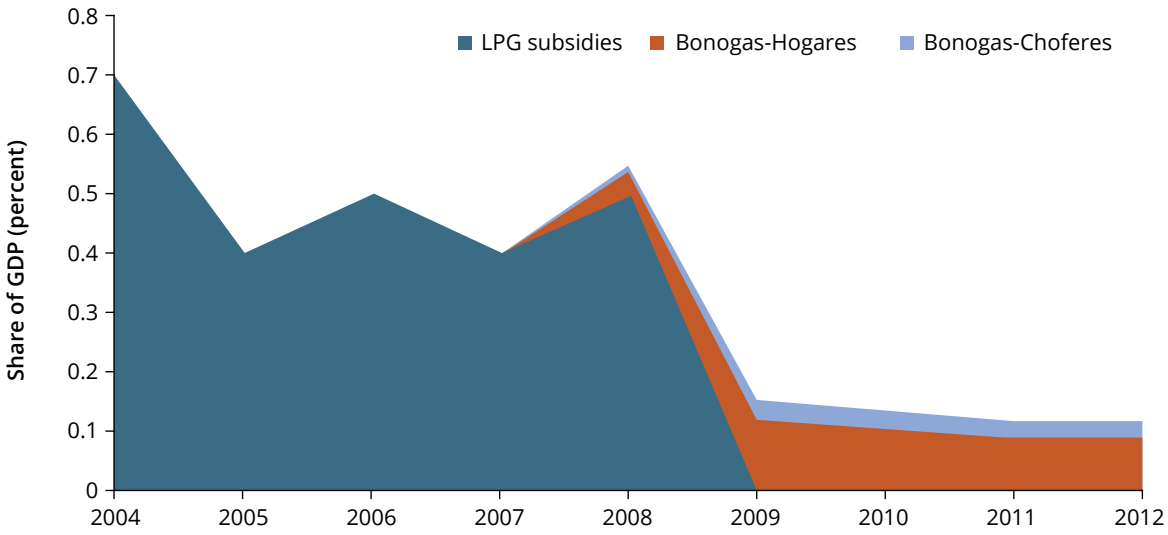
The impact of Bonogas reforms can be considered at three levels: fiscal, household, and political. On the fiscal side, the reforms are estimated to have halved the total subsidy burden from 0.5 percent of GDP in 2008 to about 0.2 percent of GDP in 2012 (ADESS 2016; Vagliasindi 2012). Given the challenges of raising revenues in the context of the global financial crisis, this gave the government some leeway in reducing the primary deficit—one of the commitments in the IMF fiscal adjustment loan negotiated in 2009.

At the household level, simulations show that Bonogas subsidies improved distributional outcomes, both in absolute terms and relative to income. In contrast to the generalized subsidy, Bonogas was progressive in absolute terms (figure 2.1).

Not only did the compensation offered by Bonogas correspond to a larger share of income for lower-income groups, as shown by a concentration curve above the Lorenz curve of income distribution, but it also was above the 45-degree perfect equality line, indicating that a larger share of total spending on Bonogas is targeted to the poor (figure 2.2, panel a). In fact, when the benefits of the reform are simulated, the analysis finds that almost 50 percent of all spending on Bonogas was targeted to the bottom 40 percent of the income distribution (figure 2.2, panel b).

FIGURE 2.1

General and Targeted LPG Subsidies in the Dominican Republic, 2004–12

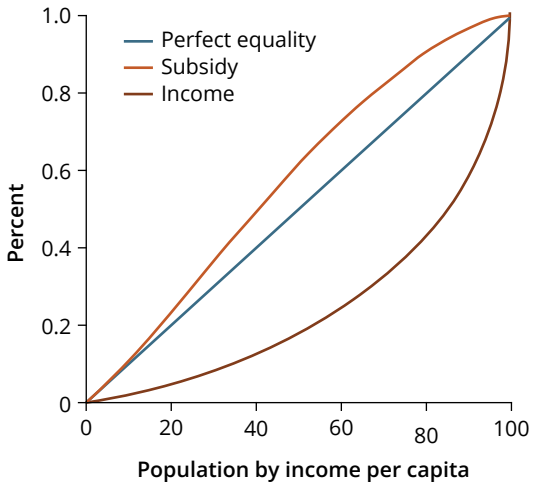


Source: Inchauste and Victor (2017) using original sources from ADESS (2016) and Vagliasindi (2012).
Note: GDP = gross domestic product; LPG = liquefied petroleum gas.

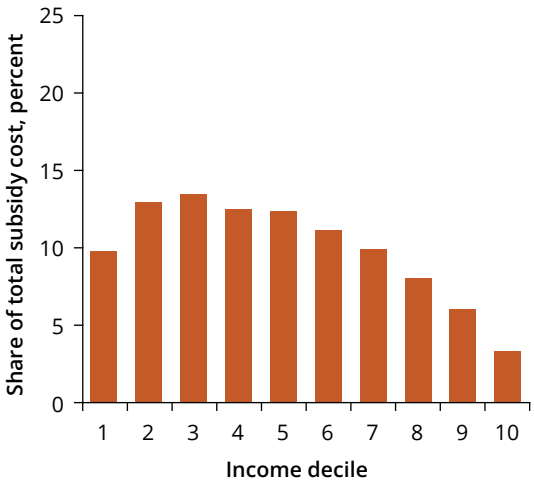
FIGURE 2.2

Concentration of Income and Gas Subsidies after Bonogas, 2007

a. Cumulative income and Bonogas shares



b. Bonogas concentration shares, by income decile



Source: Inchauste and Victor (2017) using 2007 National Household Survey of Income and Expenditure.

Bonogas expanded the scale and scope of social protection in the Dominican Republic, bringing both the poor and the middle class within its ambit. Building on the trust and credibility gained through the successful implementation of Bonogas, the government started the Bonoluz program in 2012 using the same design and delivery mechanism.

The success of Bonoluz and Bonogas depended on the efficiency and equity of the Solidaridad program itself. While the beneficiary selection process was initially based on transparent eligibility criteria, there were indications of relaxed eligibility practices over time (Gallina et al. 2017). Nonetheless, the energy cash transfer system has not only endured multiple years but also grew stronger, indicating its resilience and economic relevance and providing insights for other countries.

2.4 Lessons from the Dominican Republic's Energy Subsidy Reforms

The key lesson emerging from the Dominican Republic is that governments can use existing social protection systems to successfully design and deliver compensatory transfers as an integrated part of an energy subsidy reform program. The case also underscores the importance of developing measures to mitigate the impact on different

segments in advance through compensatory transfers. It is important to first understand which segments of society will be most affected by reform, then design measures to mitigate the impacts. Such measures can also help create supportive coalitions for reform.

The success of the Dominican Republic's energy compensatory cash transfer programs can be largely attributed to the relative flexibility and efficiency of the Solidaridad conditional cash transfer program, which provided a platform for the government to introduce Bonogas rapidly and at scale. The Bonogas and, later, Bonoluz program were integrated into the social protection platform without having to set up separate, new, and costly implementation arrangements. Using the same institution that had managed Solidaridad made it easy for beneficiaries to recognize the Bonogas program. This choice can be credited with not only streamlining design and implementation but also building trust.

Another interesting feature of Bonoluz and Bonogas was the use of well-recognized and accepted channels for directly delivering benefits to consumers. The compensation was transferred directly to households through a widely accepted debit card, with the Bonogas subsidy as a top-up for existing Solidaridad beneficiaries. This seamless integration of beneficiary identification, onboarding, and payments enabled the government to roll out the transfer within a short window. It also demonstrated the government's administrative capacity and commitment to its citizens and to international financial institutions—both important constituencies determining the overall success of the reform agenda.

Energy compensatory transfers in the Dominican Republic had strong impact and proved resilient amid changing circumstances. The programs were continued through different political administrations and largely maintained their original design principles. On the other hand, the longevity of some cash transfer programs could also risk rendering them more difficult to reform, presenting new challenges for policy makers. The good news from the Dominican Republic is that those commitments can be made fiscally manageable over the long term, and the government has put in place ongoing efforts to further reform these programs (World Bank, 2018 and 2022). This is a dimension that is worth consideration by policy makers when transitioning from broad-based price subsidies to targeted social assistance, keeping open the option of phasing them out over time and having a transparently and repeatedly communicated end date or schedule to revise and narrow the targeting, with clear timelines.

This experience shows that the reform of fuel subsidies accompanied by cash transfers can open up space for more politically sensitive subsidy reforms. On the other hand, the Dominican Republic's inability to fully phase out the cash transfers more than a decade after the reform indicates that such compensatory transfers can become difficult to reverse, presenting a dilemma for governments that wish to avoid negative impacts on households or contribute to discontent, especially in times of crisis (Inchauste, Victor, and Schiffer, n.d.).

THREE

Ukraine: Scaling Up Cash Transfers to Mitigate the Household Energy Cost Burden (2014–16)

This case study focuses on the use of energy compensatory cash transfers in the context of Ukraine's ambitious energy subsidy reform efforts during the 2014-16 period. This case study summarizes the context, adoption, scale-up and refinement of key design features and implementation approaches of the energy compensatory transfers used in Ukraine at that time, and the innovative and practical choices made by the policymakers, as a way to illustrate the potential of social assistance in complementing energy subsidy reforms. Over successive episodes, the government continued to strengthen the design and delivery approaches of the program and other initiatives, beyond the period chosen for this case study.

Ukraine's energy sector struggled with volatility and inefficiency from the time of the country's independence from the Soviet Union in 1991.[9] Energy subsidies, mainly delivered through low end-user tariffs, disproportionately benefited high-income households, hindered investment in the energy sector, and ultimately proved to be extremely costly for the national budget. Over the years, Ukraine's gas, district heating, and power sectors suffered a range of distortions, both upstream and downstream. Ukraine was one of the most energy-intensive economies in the world at the time. The state-owned firm Naftogaz had monopoly power in the gas sector, from production and imports to distribution to final consumers. Its losses were covered by the government through a complex system of budgetary transfers, generating a subsidy bill of nearly 7 percent of GDP in 2014.

The fiscal crisis that followed Russia's annexation of Crimea in 2014 led to the initiation of structural reforms of Ukraine's energy sector, which focused on improving sector performance, moving toward competition, and improving cost recovery. The ambitious reform yielded rapid results across the economy. Between 2014 and 2017, household gas prices increased fourfold and heating prices doubled. It is in this context that social protection through the expansion of energy assistance to vulnerable households played a vital role in making reforms work. Alongside the price increases, the government effectively utilized the Housing and Utility Subsidy (HUS) program as a social assistance mechanism to partially address the cost of energy, especially for poorer households.

This case study summarizes the main elements of Ukraine's 2014–16 energy subsidy reform efforts, which closely integrated price reform with social protection. Although the main focus is on the 2014–16 period, reform design improvements and strengthening of social protection through 2019 are also discussed.[10]

[9] This case study was completed in 2021, before the Russian invasion of Ukraine, and focuses on specific reforms in 2014–16.

[10] The situation changed radically after 2022, requiring a rethinking of social assistance, given the number of internally displaced persons, the energy crisis, and infrastructure damage.

3.1 Energy Subsidy Reforms and Social Protection through Compensatory Transfers

As part of the Government of Ukraine's efforts to address the fiscal crisis, and in line with its commitments in the context of the Extended Fund Facility with the IMF, a series of reforms were initiated. Starting in 2014, the government undertook reforms to move toward a competitive, transparent, and efficient energy sector on the one hand, while reducing the fiscal cost of energy subsidies and mitigating the burden of higher energy prices through social assistance to households on the other. As part of the reforms, significant increases in natural gas and heating tariffs for end consumers were made, with residential gas tariffs increasing almost fivefold while heating tariffs almost doubled, risking severe strains on households and firms. Whereas tariffs were increased mainly to address fiscal costs and macroeconomic distortions resulting from artificially low energy prices, social protection through the HUS program provided the policy space and social stability to continue and deepen the reforms, contributing to their relative success.

As part of the reform design, the gas and district heating tariff increases were front-loaded when the reforms were initiated. Recognizing the potential impact such substantial tariff increases could have on energy expenditure, thus decreasing real disposable incomes for low- and middle-income households, the government built extensive upfront social assistance into the design of the reform. The government used existing social assistance infrastructure to support households while they adapted to the new prices, gradually adjusting their energy consumption, and thereby helped ensure that energy tariff increases were socially and politically sustainable.

The main channel for delivery of the energy social assistance, the HUS program, in fact predated Ukraine's 2014 energy subsidy reform. This key energy assistance program coexisted with other targeted mechanisms for energy assistance that focused on groups such as veterans and the elderly. The country, therefore, had dedicated energy compensatory transfer schemes that it could build on when the tariffs were revised, and the HUS program was used as the primary compensatory program. After the decision to move forward with the reform, the evolution of the HUS program proceeded in three distinct phases, as described below. The overall approach of supporting price reforms with social protection has been consistent, while the mechanism's design and implementation evolved to address different challenges as the reforms progressed. The HUS program now provides a base from which to move toward a general social protection system that encompasses broader goals of addressing poverty and reducing the vulnerability of low-income households over the long run. The evolution of the HUS program through the reform and beyond is discussed below.

Phase 1: Planning and Adapting Existing Programs to Meet the Challenges of the Energy Crisis

When the energy subsidy reform started in 2014, Ukraine had two social assistance programs offering households support toward high energy bills—the HUS program and the Housing and Utilities Privileges program.

- The HUS program was the main energy assistance program, providing on-bill subsidies to consumers for utilities—electricity, gas, district heating, water, and sewage. HUS benefits were determined based on household income and energy consumption. The reforms introduced to the HUS program in October 2014 made energy-related social assistance more accessible and enabled a much more progressive distribution of energy subsidies.
- The Housing and Utilities Privileges program reduced energy bills via discounted tariffs for the portion of gas consumption that fell below a specified "allowance," by between 25 and 100 percent for different categorical groups (e.g., veterans, survivors of World War II, and victims of the Chernobyl accident, among others) covering more than 22 percent of households. Both programs were costly and had fairly limited ability to reach the poor: only 3 percent of the poorest households benefited from the HUS program, and only 12 percent were covered by the Housing and Utilities Privileges program.
- Another program was temporarily introduced in the wake of the 2014 fiscal crisis but was not scaled up because of the lack of an established and proven delivery system. The temporary compensation program introduced in July 2014 to cover the increased cost of gas, district heating, and hot water was targeted at households whose incomes were below the subsistence minimum. Initial data showed that program uptake for this temporary program was very low. As of January 2016, only 0.1 percent of households had applied for assistance. The low demand for the new program was attributed to issues with (1) socialization of the new program; (2) potential beneficiary understanding of the scale of tariff increases, which were not yet reflected in utility bills; (3) awareness and understanding of the new compensation program; and (4) application process clarity and speed. Further simplification of access to the HUS subsidy during 2014–15 made this new temporary compensation program largely redundant. Low-income families eligible for compensation reportedly preferred to apply to the HUS program, which covered the entire bill for housing and utility services and was a well-established program, as opposed to the newly created but temporary compensation program.

The government focused on the HUS program as the primary compensatory program and aimed to strengthen its targeting and eligibility terms while reducing the coverage of the group-specific assistance programs.

Although affordability of energy bills remained a concern, research indicated that households were not uniformly against price reform, provided the price reforms were accompanied by improvements in service delivery. For example, an assessment of public opinion on

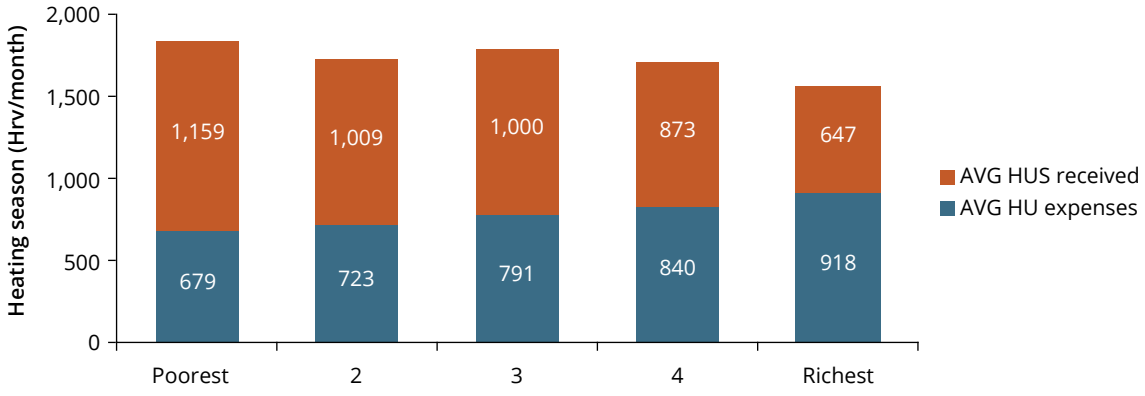
energy reforms conducted in late 2014 across 20 cities revealed that consumers were concerned about their potential inability to pay their energy bills as well as about the rising cost of other basic goods (Worley, Pasquier, and Canpolat 2018). Public opinion survey respondents indicated that tariff increases would need to be accompanied by proactive actions by the government to mitigate the impact, and the government would need to install meters, improve public communications, modernize infrastructure to ensure quality of service, remove bureaucratic obstacles to independent heating, and provide financial support for energy efficiency improvements.

Phase 2: Substantial Scale-Up of Social Assistance via the HUS Program

The HUS program benefits, which represented a significant share of utility bills, helped reduce households' burden from energy bills, particularly among low-income households during the cold season (Figure 3.1).

For households that use natural gas for space heating, the total gas bill typically accounted for a large portion—more than half—of the total energy and fuel bill. As shown in Table 3.1, a comparison of energy and utility costs as shares of net income between households that did not receive HUS assistance and those that did receive the HUS reveals that

Figure 3.1
Ukraine HUS Program Receipts in Household Energy Payments



Source: Authors' estimates based on a nationally representative survey fielded by the World Bank in August 2016.
Note: Sample size = 3,040 households. Quintiles estimated based on household per capita income. Heating season estimates are queried retroactively for the previous season. HUS = Housing and Utility Subsidy; HU = housing and utility.

TABLE 3.1

Electricity, Natural Gas, and Fuel Costs for Households That Use Natural Gas for Space Heating in Ukraine

YEAR	FULL GAS BILL AS SHARE OF ALL FULL UTILITY BILLS (AVERAGE) (%)	ELECTRICITY, GAS, AND FUELS EXPENDITURE AS SHARE OF NET INCOME FOR HOUSEHOLDS THAT DO NOT RECEIVE HUS (%)	ELECTRICITY, GAS, AND FUELS EXPENDITURE AS SHARE OF NET INCOME FOR HOUSEHOLXDS THAT RECEIVE HUS (%)
2014	64.46	5.67	5.91
2016	71.88	11.39	6.15
2017	56.14	11.18	6.70

Source: Alberini and Umapathi 2021.

HUS was able to mitigate the impacts of price increases.[11] Among the poorest households, the HUS program covered two-thirds of average household energy expenses compared with 40 percent for the richest quintile. Although the shares were similar across the two groups in 2014, prior to the tariff hike, they were 5 percentage points apart in 2016 and 2017 (Alberini and Umapathi 2021).

Although the program was generous for low-income families, there was a lag in uptake of the benefits, with many eligible households either unaware of or unable to register for the program. In view of the implementation experience on the ground, and feedback from stakeholders over the course of 2015, the government developed measures to strengthen energy social assistance provided through the HUS program. Addressing poverty required simplifying access to increase coverage but also changing the formula to increase the generosity of compensation. As part of the new measures, the enrollment conditions were significantly relaxed (e.g., applications involved only a single-page form that could be submitted in person, by mail, or via the internet), and thus program uptake was encouraged at scale. Throughout 2015, the government carried out a large-scale public information campaign, clarified eligibility norms, and simplified the application process, which encouraged households to join the program.

As a result of the combined communications, program redesign, and implementation efforts, there was an extraordinary scale-up of social assistance, from 1.1 million households in 2014 to 6.9 million households by the end of 2016 (covering 44 percent of households in Ukraine). Over that period, the HUS program substantially reduced the burden of tariff increases by covering a large share of households' utility bills (14 percent on average, and 23 percent for the bottom 40 percent of the income distribution, and 32 percent for the bottom 10 percent). There was also a significant decline in energy poverty, indicating that the HUS program was equity enhancing and reduced the burden of increased tariffs

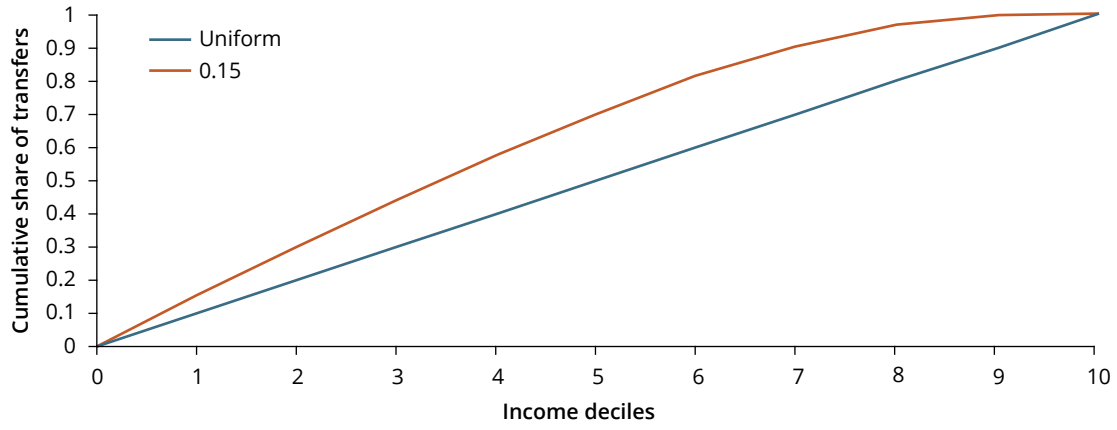
[11] Net income is household income minus the HUS (which Ukrstat adds to the other sources of income to compute total household income).

for the most vulnerable households. Throughout this process, the government undertook critical analyses, supported by the World Bank through technical assistance, to (1) assess the fiscal and poverty impact of the proposed changes, (2) develop options for simplification of the application process, (3) enhance communications efforts, and (4) increase capacity for implementation.

During the scale-up phase, the Government of Ukraine focused on reducing exclusion errors to enhance support to households and help gain acceptance of the broader energy subsidy reforms. There was a tradeoff between greater coverage and fiscal cost on the one hand and, on the other, strict targeting of low-income households, which imposes a larger administrative burden and offers less protection to households. As a consequence of the rapid expansion of the beneficiary base, the program costs increased significantly, from 0.2 percent to 2.3 percent of GDP between 2014 and 2017, imposing a substantial burden on public finances. Overall, expenditure on the HUS program constituted nearly half of the budgetary allocation for social protection, leaving little fiscal headroom for strengthening social assistance more broadly.

Overall, although the targeting was progressive, the HUS program effectively protected the middle class with a significant share of the benefit going to the upper-income deciles (Figure 3.2). As the program matured, the focus shifted toward monetization of the benefits at the consumer level along with stricter targeting.

Figure 3.2
Ukraine HUS Targeting: Cumulative Share of Benefits by Income Decile



Source: Authors' estimates based on data from Household Budget Survey, National Statistics Office.
Note: The orange line indicates transfers according to the benefit formula calculated using social norms, including a factor of 0.15 to calibrate the income of the household.

Implementation of the HUS relied on the existing delivery mechanism—households received discounts on their utility bills that varied by income and level of energy usage. Although this was an advantage for rapid scale-up and very effective in mitigating the increase in tariffs in the short run, it was tied to energy use and fell short of direct cash transfers through which beneficiaries could optimize their expenditure across a broader range of household needs. Full monetization of the HUS was taken up in the next phase, described below.

Phase 3: Improving HUS Delivery and Fiscal Sustainability through Monetization and Eligibility Conditions

In addition to the refinements needed to the delivery modalities, public financial management of the energy subsidies also needed to be reformed. The existing system relied on a complicated interinstitutional settlement scheme based on multilateral common decision protocols between utilities, distributors, gas producers and importers, and the state budget through a long chain of mutual noncash offsets. These settlements were not linked to the actual provision of services but were estimated, depending on the claims filed by the companies. This situation led to limited transparency and inadequate financial controls related to overinvoicing, lowered incentives to conserve energy, increased risks of fraud, and raised market entry costs for new participants. The system also led to cash flow problems that constrained the working capital needed by gas and district heating companies for sustainable operations. Recognizing this, in late 2017 the Government of Ukraine gradually moved to monetize the gas subsidy regime and set up a more transparent system of fiscal management, with analytical and advisory support from the World Bank. In parallel to the changes to the social assistance mechanisms, the energy sector reform efforts continued.

As a first step, the current settlement scheme was to be streamlined and monetized at the level of gas and district heating utilities. Starting in January 2018, the government introduced utility-level monetization. This move improved the HUS settlement process by replacing multilateral common decision protocols with cash-based bilateral settlements based on subsidy payments for actual services provided, thus strengthening transparency, predictability, and accountability for HUS settlements. This was achieved swiftly by introducing key legislative changes and did not affect the HUS administration at the level of beneficiaries, who continued to receive the assistance as discounted utility bills. This was also a necessary step before the second phase of monetization of the HUS, which entailed the provision of monetized energy assistance compensation directly to eligible households.

In January 2019, the government announced consumer-level monetization as the next step toward further improving the market competition and efficiency of the HUS. Against a background of earlier challenges to improving the efficiency and transparency of subsidy delivery approaches, the energy subsidy reform offered a good opportunity to address

long-standing inefficiencies in social assistance and the energy sector. The new phase of reforms was aimed at changing the subsidy delivery modality by transferring cash directly to households instead of through a discount on utility bills. This change was expected to strengthen transparency and provide energy-saving incentives by sending stronger price signals while lowering fiscal costs. If designed and implemented well, monetization had the potential to lead to substantial welfare, fiscal, and administrative improvements, including program simplification, reduced leakage, more choice for consumers, and better economic incentives for utilities and households to conserve energy. Moving to direct cash transfers also implied better targeting of beneficiaries without increasing exclusion errors that could disproportionately affect low-income households and other vulnerable groups. The transition to consumer-level monetization also entailed risks, most importantly, the potential negative impact on payment discipline within the sector. There was a risk that heating companies might not settle their bills with suppliers—previously settled using the HUS budget—unless strictly monitored, in addition to the risk that households would not pay utility bills.

Starting in March 2019, the government made the decision to fully monetize the HUS program, with all 3.8 million households receiving the benefit in cash and becoming responsible for paying the full cost of utilities, as per the Law on Housing and Communal Services passed by the parliament the previous year. Measures were introduced to make subsidy eligibility conditional on clearing any outstanding arrears, and those who accumulated arrears faced the risk of losing the HUS. Consequently, payment discipline among HUS recipients reached 98 percent. Moreover, consumer-level monetization provided an opportunity for much-needed optimization of social assistance through the integration of the biggest social program (the HUS) with the rest of the social assistance system, strengthening Ukraine's social protection system as a whole.

On the other hand, the increasing cost of the HUS program necessitated a major overhaul of social assistance. The HUS program had become by far the largest social assistance program in Ukraine. Its budget grew to Hrv 71 billion (US$2.7 billion) in 2017, equivalent to more than 2.5 percent of Ukraine's GDP. Recognizing the need to rein in budgetary expenditure, Ukraine introduced eligibility changes to the HUS program from 2017 onward. First, the income eligibility criterion was shifted to focus more on current income by shortening the time period for income assessment from the previous year to the previous six months; it was also broadened to include asset holdings. This change led to a decline in the number of eligible beneficiaries from 6.5 million in 2016 to 3.9 million in 2018. Second, further measures to contain the cost of the HUS program and improve its targeting were approved in 2018, including imputing the income of individuals who report very low or no incomes at three times the subsistence minimum. Third, the predetermined criteria used to determine the amount of consumption that could be subsidized were reduced. Fourth, restoring an earlier practice, HUS credits could no longer be accumulated to pay for the household's share of utility payments, thus eliminating the possibility of rolling over previously underutilized subsidies to offset this mandatory payment in any given month, contributing positively to the cash flow of gas and district heating companies.

These measures reduced HUS coverage and generosity and helped control the costs. Improvements in the targeting of the HUS program were seen as an important step toward a new phase of reform aimed at transferring the benefit in cash to households.

Future Phases: Moving from Energy Assistance to Means-Tested Poverty Assistance (2019–21)

Although Ukraine's poverty rate declined from around 26 percent in 2016 to 20 percent in 2018, it remained a critical issue. Social assistance reform was a key priority in Ukraine in the face of high levels of poverty and ongoing fiscal pressures, and in 2019, the government began an ambitious reform of social assistance to provide more effective support to lower-income households while consuming fewer fiscal resources. Priorities included the system's rationalization, the strengthening of labor activation measures, an integrated approach to poverty reduction, and fiscal sustainability.

One of the central elements of this approach would be the fiscal consolidation of key benefits as well as the rebalancing of the fiscal resources from the energy subsidy program—the HUS—toward the Guaranteed Minimum Income program, which used improved targeting approaches and was found to be highly effective in reducing poverty, along with consolidation of some child benefits such as the single-mother benefit. The integration of common types of cash benefits and links to social services was expected to simplify the system, reduce the exclusion of low-income households, increase the benefits to those households, reduce fiscal pressures, and discourage welfare dependency.

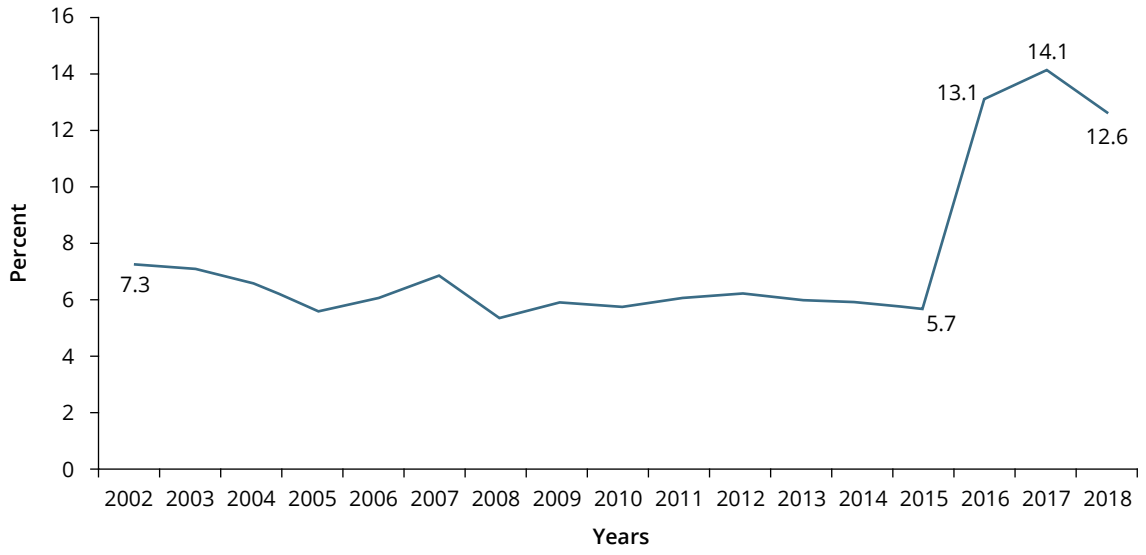
3.2 Outcomes and Impact

The changes made as part of the 2014–16 reforms significantly reduced energy subsidies, effectively eliminating the budgetary deficit by 2019 while imposing a substantial burden on both households and the productive sectors of the economy (Table 3.2). Aggregating across categories, average annualized household energy expenditure as a share of income increased from 5.7 percent in 2015 to over 14.0 percent in 2017 before declining to 12.6 percent the next year, with the bottom two deciles bearing the brunt of the subsidy adjustment burden (Figure 3.3).

Following the tariff reforms, total gas consumption declined by nearly 9 percent between 2015 and 2016 with the largest decrease in industry (23 percent) followed by households (6 percent). Reduction in demand helped reduce import security—gas imports declined from 19 billion cubic meters in 2014 to 16 billion cubic meters in 2015 while the share of Russian gas supplies in overall imports fell from nearly 75 percent to less than 40 percent.

Figure 3.3

Share of Energy Spending in Total Household Income in Ukraine, 2002–18



Source: Authors' calculations based on Household Budget Survey.
Note: Annualized average shares. There is high variation between the heating and nonheating season.

TABLE 3.2

Heating and Gas Tariffs in Ukraine, before, during, and after the Reform (constant 2010 Hrv)

REAL RESIDENTIAL ENERGY PRICES	2013	2014	2015	2016	2017	2018	2019
HH gas—Hrv/tcm	801	788	1,541	2,788	2,883	2,798	2,812
Heat—Hrv/Gcal	259	269	266	465	528	519	516
Electricity—Hrv/kWh	0.31	0.27	0.27	0.39	0.50	0.48	0.46

Source: Authors' calculations based on Ministry of Energy data.
Note: Gcal = gigacalorie; HH = household; Hrv = hryvnia; kWh = kilowatt-hour; tcm = trillion cubic meters.

Finally, legislative steps were taken to incentivize domestic gas exploration and production, gradually opening Ukraine's energy market to new entrants. Private sellers accounted for 24 percent of wholesale transactions in 2014, with Naftogaz responsible for the rest. As a result of reforms, the share of Naftogaz sales was reduced to 62 percent in 2019.

Although the results look impressive in hindsight, achieving them was by no means an easy task. The reforms initiated by the government in 2014 only partially addressed existing

TABLE 3.3

Heating and Gas Subsidy in Ukraine, 2013–19

TOTAL SUBSIDY (US$, MILLIONS)	2013	2014	2015	2016	2017	2018	2019e
Heat—HUS	500	305	320	0	0	0	0
Gas—DH companies	3,311	2,657	1,616	568	379	685	78
Gas—HUS	7,698	6,010	2,861	750	962	1,568	175
Total	**11,009**	**8,667**	**4,476**	**1,318**	**1,341**	**2,254**	**253**

TOTAL SUBSIDY (% OF GDP)	2013	2014	2015	2016	2017	2018	2019e
Heat—HUS	0.5	0.3	0.3	0.0	0.0	0.0	0.0
Gas—DH companies	1.8	2.0	1.8	0.6	0.3	0.5	0.1
Gas—HUS	4.2	4.6	3.2	0.8	0.9	1.2	0.1
Total	**6.5**	**6.9**	**5.3**	**1.4**	**1.2**	**1.8**	**0.2**

Source: Authors' calculations based on Ministry of Social Policy.
Note: DH = district heating; GDP = gross domestic product; HUS = Housing and Utility Subsidy.

distortions; much remains to be done to achieve the goal of well-functioning energy markets in the long run. It was particularly important to maintain policy support and social stability in an otherwise volatile political environment.

Nearly five years into the program, in 2020, the HUS was assessed as having achieved a large portion of its objectives while moderating the impact on end users (Table 3.3).

3.3 Lessons from Ukraine's Experience

Important insights and lessons can be drawn from Ukraine's energy subsidy reforms, which largely succeeded despite the potential risks faced. Ukraine's 2014–16 energy subsidy reform effort is a good example of how a government can take advantage of existing social protection mechanisms to provide energy compensatory transfers, to help protect consumers from reform impacts and maintain political buy-in and popular support for a reform program. The experience shows how compensatory transfers supporting energy subsidy reforms can gradually evolve, expand, and be consolidated over different phases of reform. It is also worth highlighting that Ukraine's energy subsidy reforms were part of a broader structural reform effort in the sector, which focused on improving sector performance. A lot of the foundational work that enabled the tariff reforms to be implemented and become sustainable was part of those broader reforms, including strengthened regulation, transparency, focus on efficiency and cost reduction, improved utility

performance, and commercial discipline. The improved management of the energy sector as a whole created the space to continue the compensatory transfers at scale. It also became important to promote competition in the gas market and to improve the targeting of the HUS.

Amid a challenging political and economic context, Ukraine managed to design, implement, refine, and consolidate a large-scale and inclusive cash transfer system to support its energy subsidy reform agenda. This ambitious effort was supported by a well-designed communications and outreach campaign. Some key lessons are summarized below:

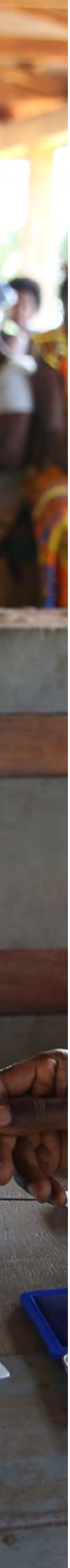
- **Identify, scale up, and consolidate an existing program.** To mitigate the impact of substantial tariff increases on households, the government revamped an existing energy compensatory transfer program, the HUS, as the primary tool for social assistance payments. Although there was an attempt to institute a temporary compensation program for the most vulnerable, the idea was abandoned in favor of expanding the HUS beneficiary base. The government could therefore focus its attention on successfully implementing the HUS and gaining popular support for the energy reform agenda.
- **Consider making the program inclusive at the outset, if feasible.** Compensatory transfers for energy often suffer from an inherent tension between efficiency and equity objectives. Ukraine followed an interesting strategy: it rapidly scaled up the HUS to cover almost half of all households in the country while introducing progressivity through formula-based transfers that depended on household income level. The government, therefore, focused on minimizing exclusion errors in the choice of HUS beneficiaries, recognizing the risk of limited acceptance of reform if compensation did not benefit at least some of the nonpoor initially. This pragmatic approach helped create policy space to continue the reforms, affording the government time to subsequently redesign the program. The focus on minimizing exclusion errors can be credited with helping facilitate acceptance of reform.
- **Understand beneficiary needs and communicate well.** Initially faced with slow uptake, the government sought to address the challenges encountered by households, drawing on the feedback received from stakeholders through field surveys. An effective communications strategy was put in place to reach people with key messages regarding their benefits as well as program guidelines and procedures. This also helped in the redesign of the program by relaxing the eligibility criteria, simplifying administrative processes, and implementing formula-based transfers to better target public resources to those most in need. The HUS, therefore, benefited from the government's openness and flexibility for incorporating the views of the beneficiaries, demonstrating its commitment, and gaining political capital to continue the reforms. This experience showed the importance of clear and consistent communication through the course of the reform. If reform goals and timelines are not communicated clearly from the outset, compensatory transfers can create an expectation that the government will continue to support households to reduce their energy bills even when fiscal costs increase, especially in the context of volatile energy prices.
- **Gradually strengthen program design and targeting.** Once the initial reforms were

implemented, the government took steps to move toward monetization at both utility and customer levels. This monetization effort required both technical and political acumen. Promoting transparency in public financial management and competitive energy markets is difficult in any country, and Ukraine is no exception. This is particularly true when powerful vested interests (including large state-owned companies) that benefit from the status quo are involved. By early 2019, the government initiated direct payment to beneficiaries instead of discounted utility bills and moved to a cash settlement with gas and district heating companies. At the same time, it reduced the number of beneficiaries by tightening the eligibility criteria and excluding higher-income households, thereby improving efficiency and reducing the fiscal burden of the program. Improving the targeting of social assistance by phasing out transfers to certain groups can lead to negative reaction unless it is planned carefully, implemented gradually, and communicated clearly and repeatedly.

- **Integrate energy compensatory transfers with broader social assistance.** Ukraine's experience illustrates the benefits of integrating compensatory transfers into existing social assistance system with established delivery mechanisms. Mitigating the impact of tariff increases through a stand-alone compensatory transfer program can be costly and unsustainable in the long run. Once the short-term benefits of energy compensatory transfers run their course, many governments face difficult choices in the medium and long run. Ukraine's experience shows that governments would do well to set a clear timeline for phasing out temporary compensatory transfers, put in place a strategy to strengthen the social assistance and social protection policies targeted at the poor and vulnerable, gradually move to a more sustainable social assistance program that would protect citizens from income shocks more broadly, and continuously communicate to ensure citizen awareness of the support options available through the broader social assistance system.

FOUR

Conclusions and Areas for Future Consideration



This chapter draws together the insights from the global stocktaking and case studies covered in this report to provide a better understanding of the drivers, objectives, and implementation approaches for the use of cash transfers in the context of energy subsidy reforms. After outlining key takeaways, this chapter identifies areas for further consideration and future work.

It is increasingly recognized that the success of energy subsidy reforms depends crucially on measures to mitigate the impact of the increased cost of energy consumption on households, especially the poor and the vulnerable, through effective, equitable, and efficient social protection interventions. Generalized price subsidies not only create market distortions but are also highly inequitable, favoring higher-income segments that consume more energy than poorer households—a problem that can be addressed through better coverage and targeting of compensatory transfers. A review of different approaches suggests that measures targeted in various ways can help offset the increased burden on household budgets (Gelb and Mukherjee 2019).

The global stocktaking and case studies show that in countries that reformed energy subsidies and complemented them with cash transfers, program objectives and design and implementation approaches evolved over time, often in line with the increasing role and sophistication of social protection instruments. Of the cases reviewed for this report, the energy subsidy reforms in the Dominican Republic offer insights into how to coordinate and integrate energy compensatory transfers with existing social assistance programs. Similar approaches were adopted by Brazil, Malaysia, Morocco, and Tunisia with varying degrees of coverage. The Dominican Republic case also illustrates an approach involving moving from lifeline electricity tariffs toward cash compensation. This was attempted in other countries, such as Ghana, Kenya, and the Philippines, with varying approaches and outcomes. Ukraine's 2014 energy subsidy reform effort, which was initiated amid internal and external pressures that necessitated the reduction of significant budgetary transfers due to price subsidies, entailed increases in tariffs for key utility services and provision of broad-based compensatory transfers covering nearly half of all households in the country. This case is similar to those of Iran, Syria, and Yemen, countries that have worked to address substantial fuel subsidies in a challenging macrofiscal environment, and to address fiscal costs by moving toward the pricing of energy services at levels allowing recovery of efficient costs and provision of better price signals to end users while using fairly generous compensation to support those affected. The global stocktaking shows that sustained commitment to reform is critical, and countries can draw on past experiences to strengthen and refine the design of reforms in succeeding episodes, and use compensation as a critical part of the policy toolbox in other sectors. In this respect, the reform efforts of India and Indonesia are worth mentioning, where governments have built on several reform episodes and gradually included social protection and compensation in their design.

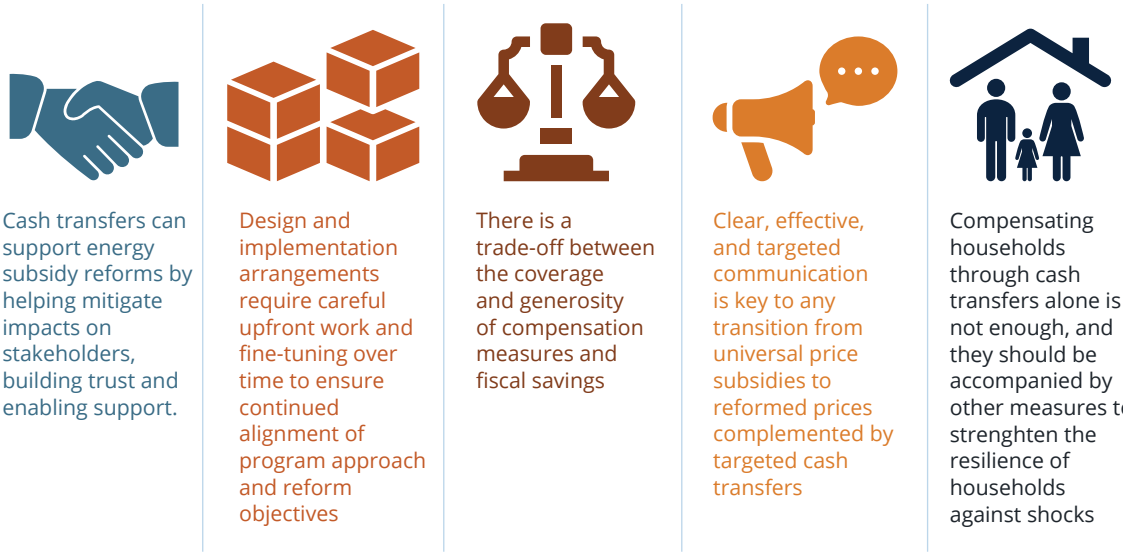
The institutional approaches for utilizing compensatory transfers in support of energy subsidy reforms have also varied and evolved over time. In the simplest form, three main approaches appear to have been followed as countries move away from general price subsidies and toward targeted support through social assistance.

- Under the first approach, energy compensatory transfers tend to be introduced through the creation of a new program or mechanism to mitigate the impact of price shocks. India's and Iran's programs where new cash transfers were introduced to mitigate impact of broad-based price increases, followed similar approaches. The implementation approaches of these programs are recognized for the way they moved away from general price subsidies to direct delivery of compensation to citizens. In these countries, benefits were delivered to citizens using bank accounts, many of which were opened specifically to receive the transfers.
- The second approach shares the objectives of the first (i.e., reforming prices while providing compensation to targeted beneficiaries), but involves adaptive social protection and use of existing social assistance mechanisms and delivery systems for energy compensatory transfers. Such delivery systems cover the entire process, from beneficiary identification to onboarding and payments. Ukraine first expanded the coverage and generosity of transfers, and then revised the benefit delivery modality, moving from budgetary transfers to utility companies to direct compensation to households. The case of the Dominican Republic provides insights into how to coordinate and integrate compensatory cash transfers with existing systems, especially conditional cash transfers (as established through Programa Solidaridad). Similar approaches were adopted by Brazil, Malaysia, Morocco, and Tunisia with varying degrees of coverage.
- The third approach is a more "holistic" and forward-looking one, encompassing reforms to support a country's just transition, integrating separate but closely related considerations around decarbonization, employment, and equity. Moving beyond cash transfers to compensate for energy price reforms, the third approach entails integration of social protection into the more comprehensive set of macroeconomic, fiscal, energy, climate, employment, and human development policies to enable a just transition, to anticipate, manage, and address the distributional, social, and economic impacts of efforts to decarbonize the economy.
- Most of the reform episodes reviewed for the stocktaking in this report followed the first two approaches. Going forward, however, the third approach is becoming increasingly relevant as governments (and their development partners) face the challenges of managing the fiscal, development, and climate-related disruptions in the coming years and decades. Social protection and employment policies will have a critical role in supporting investments toward a just transition over the next decade and beyond for many countries, in particular for large GHG emitters such as Brazil, China,[12] India, and Indonesia, as well as Germany, the United Kingdom, and the United States.

Some of the key observations and conclusions from the global stocktaking and case studies are discussed below and summarized in Figure 4.1.

[12] China has already eliminated consumer subsidies (as direct budgetary spending), but a moderate degree of value accrues to fossil fuels through various forms of indirect support. In China, the indirect costs of fossil fuels, especially coal, as a major source of energy exceed the direct fiscal costs and require action to address negative externalities. The Government of China has committed to achieving net zero emissions by 2060, which could be the turning point for fossil fuel markets and the global energy transition. The country's phasing out of coal will have significant implications for employment and social security.

Figure 4.1
Summary of Lessons



Source: Original figure for this report.

Cash transfers can facilitate implementation of price reform by mitigating the impact of the reform on key stakeholders, thereby building trust and enabling support among key stakeholders. The global stocktaking review found that a significant share of countries introduced energy subsidy reforms to mitigate a macrofiscal crisis that had put pressure on the government to rein in public spending affecting the general population, especially the poor. Introducing and implementing cash transfers requires a significant amount of groundwork to clearly explain to and secure understanding from key stakeholders around its objectives, implementation approach, and eligibility requirements. Building trust and supportive coalitions among stakeholders requires investments of time and effective outreach to a large group of stakeholders—including, most importantly, the beneficiaries themselves. But the payoffs are significant in terms of sustainability, economic outcomes, social cohesion, and political stability.

Cash transfer design and implementation arrangements require careful upfront work and fine-tuning over time to ensure continued alignment of the program approach with reform objectives. Careful preparatory work and rollout effort is needed to ensure the design, sequencing, and delivery of mitigation measures meet the reform objectives. Program design choices should be guided by the readiness and capacity of existing institutional frameworks and require input from various government agencies and stakeholders. For example, the decision of whether to create a stand-alone transfer

mechanism or build upon an existing one is likely to be influenced by the coverage of existing programs as well as the available delivery infrastructure. Program design should accommodate changing conditions, and countries can use implementation experience to design and implement better reforms over time. In fact, in several of the country experiences reviewed, the program design was refined, with eligibility criteria and benefits being restructured and coverage revised in succeeding phases. A streamlined system that accurately targets and delivers transfers can help increase program uptake and build public support for reform, hold the government accountable for reform outcomes, and strengthen the social protection system as a whole. Considering the multiple dimensions of energy subsidy reform, a whole-of-government approach with close coordination across the ministries of finance, energy, employment, and social protection is key. Cash transfers themselves involve multiple ministries, departments, and agencies, which makes coordination essential, from beneficiary identification and registration to targeting, benefit delivery, outreach, and evaluation of program effectiveness.

There are tradeoffs between the coverage and generosity of compensation measures and the fiscal savings from energy subsidy reforms that incorporate a cash transfer element, and it is important for practitioners and decision-makers to be aware of them. Although fiscal pressures are among the key drivers of energy subsidy efforts, the focus on fiscal savings often needs to be balanced with other social protection considerations. The stocktaking for this report shows that the generosity and coverage of cash transfers is a key factor determining the magnitude of net fiscal savings. It is not surprising that the actual savings derived from reforms depend on the reform design, which in turn is influenced by the objectives it seeks to achieve. Fiscal savings are important from a macro stability standpoint, but they alone do not guarantee adequate support for the delivery of the reform. In addition to enabling saving of fiscal resources, well-designed energy subsidy reform efforts can help eliminate distortions, contribute to growth, improve efficiency, and enable more equitable distributional outcomes. Targeted cash transfers to mitigate select impacts of energy subsidy reform can contribute to the building of supportive coalitions for reform, and by facilitating the sustainability of reforms over several years, can deliver longer-term benefits that may offset some of the more modest fiscal savings up front.

Clear, effective, and targeted communication is key to any transition from universal price subsidies to reformed prices complemented by targeted cash transfers. While developing the reform design, it is important to engage with stakeholders that stand to be affected by reform early on. Communication is critical for explaining the purpose of the reform, the benefits of cash transfers, and how the transfers will be delivered. A well-designed communications strategy can help the government garner acceptance of the reform across government levels and among the public at large. Communication and stakeholder engagement are also critical to informing beneficiaries about the design of the cash transfer and explaining benefit levels and duration, and thereby managing expectations, enabling program uptake, and supporting implementation. Clearly articulating and documenting the steps required to receive cash transfers (e.g., the application process, procedures for opening bank accounts, required identification documents, and so on) is important to facilitating the uptake of a program and requires significant government effort.

Compensating households through cash transfers alone is not enough, and the transfers should be accompanied by other measures to strengthen the resilience of households against shocks. Cash transfers and broader compensatory assistance are one set of tools in a larger policy toolbox that governments can deploy to support energy subsidy reforms. In the short term, a key priority should be complementing cash transfers, which offer temporary income support for households, with support for sustainable alternatives, in particular energy efficiency and renewable energy to help households strengthen their resilience against future shocks. Whereas a temporary cash transfer can alleviate the losses of those that will be negatively affected by the reforms and help build support, a permanent social protection system, set up in advance, can help fulfill the government's broader distributional goals (Yemtsov and Moubarak 2018). The use of a social protection lens can help governments make choices that support equity, efficiency, and growth.

Considerations for the Future

This report focuses on only one of the multiple dimensions of energy subsidy reform efforts: the role of social assistance, and cash transfers in particular, in mitigating the impact of those efforts. Subsidies have implications for the affordability and quality of energy services, the financial viability of the energy sector, and fiscal balances and macroeconomic performance. Energy subsidies and their reform can, directly and indirectly, affect people's energy bills and livelihoods, firms' competitiveness, GHG emissions, human health, and the environment (Flochel and Gooptu 2017). As experiences around the world have shown, designing and implementing a socially acceptable and sustainable energy subsidy reform requires a holistic approach that combines understanding of and action across a range of economic, financial, environmental, social, and political factors, considering all stakeholders, including industry players, firms, and households (Gooptu 2019).

It is becoming increasingly clear that improvements in social protection systems can make substantial contributions to the delivery of energy subsidy reform efforts. Cross-country studies have highlighted the importance of the government's administrative capacity to design and implement better-targeted social assistance to accompany reforms (Inchauste and Victor 2017). The energy subsidy reform efforts explored in the global stocktaking undertaken for this report, as well as in other related literature, all point to the importance of laying the groundwork for a social protection system.

Continued investment in social protection systems to improve the delivery of social benefits is needed, along with strengthening capacity across different sectors. Protecting select segments of society from energy price increases for a given period is not much different from the objective of protecting vulnerable households from any economic shock. Social assistance programs are not needed only in times of crisis or reform, but rather as a continuous feature of the system. Most countries already have social assistance programs in place, and typically reform them on a continuous basis to improve coverage,

adequacy, and efficiency. Energy subsidy reforms provide an opportunity for governments to enhance their social assistance and make it more adaptive and flexible. Cash transfer mechanisms can require significant upgrading of implementation capacity and delivery mechanisms.

Going forward, building adaptive social protection systems that can respond to a variety of shocks and meet the changing needs of governments and households, as well as the use of emerging technologies for public service delivery, will be critical. Adaptive social protection systems will require long-term planning and investment because such transitions to develop social protection mechanisms that can remain adaptable and "fit for purpose" in the face of evolving contexts and challenges can take years. The capabilities of such systems can be further enhanced by advanced technological processes, including digital payments via smart cards or directly to bank and mobile money accounts, that enable social assistance to reach the intended populations in a timely manner while providing both convenience and choice of how to use it. Efforts to reform energy subsidies and improvements to social protection can occur in tandem, or one can spur the growth of the other, as seen in cases where the introduction of targeted cash transfers in tandem with energy subsidy reforms paved the way for improvements in social protection systems, targeting and delivery approaches. International good practice highlights the value of gradually reducing subsidies and sequencing price increases, matched with appropriate mitigation mechanisms and credible policies such as cash transfers that also provide a tool for governments to target them efficiently and effectively. Yet caution and close attention should be paid in considering, adopting and rolling out technologies to ensure they don't generate unintended effects.

Moving beyond compensatory transfers, integration of social protection and broader macroeconomic, fiscal, energy, climate, employment, and human development policies will be essential for policy makers to anticipate, manage, and address the distributional, social, and economic impacts of efforts to decarbonize their economies. Amid efforts to enable a just transition and equitable growth while working to mitigate and adapt to climate change, countries can consider the multiple dimensions that need to be addressed and take advantage of energy subsidy reforms and social protection mechanisms to achieve broad-based economic transformation. Building on elements of the third approach to integrating compensatory transfers into broader reforms, discussed earlier, countries can take actions that contribute to broader economic transformation, including to support the next generation of reforms with expanded social protection and labor policies, and support a just transition to a lower carbon future. For example, the transition of workers from fossil fuel jobs may be supported through a package of pre- and post-layoff assistance comprising mobility grants, reskilling training, and financial support[13] for the affected workers and their families (Cunningham and Schmillen 2021). As the global economy emerges from the global pandemic and multiple crises—fiscal, developmental, and climate—an integrated approach should not remain an aspiration but a necessary, urgent, and actionable one. Social protection will continue to have a critical role in this integrated approach.

[13] So-called active labor market programs need to be designed to increase workers' capacity and connect them to jobs. Integrating green jobs can help ensure that workers will be reallocated to environmentally and economically sustainable sectors (Ruppert Bulmer et al. 2021)

References

ADESS. 2016. Subsidios Otorgados Por Año y Mes [Subsidies Granted by Year and Month]. Statistical Report. Santo Domingo, ADESS.

Alberini, A., and N. Umapathi. 2021. "What Are the Benefits of Government Assistance with Household Energy Bills? Evidence from Ukraine." Policy Research Working Paper 9669, World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/35630.

Alesina, A., G. Ciminelli, D. Furceri, and G. Saponaro. 2021. "Austerity and Elections." Working Paper 21/121, International Monetary Fund, Washington, DC. https://www.imf.org/en/Publications/WP/Issues/2021/04/30/Austerity-and-Elections-50245.

Almenfi, M., M. Breton, P. Dale, U. Gentilini, A. Pick, and D. Richardson. 2020. "Where Is the Money Coming From? Ten Stylized Facts on Financing Social Protection Responses to COVID-19." Social Protection and Jobs Policy and Technical Note 23, World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/34802.

Anand, R., D. Coady, A. Mohommad, V. Thakoor, and J. Walsh. 2013. "The Fiscal and Welfare Impacts of Reforming Fuel Subsidies in India." Working Paper 13/128, International Monetary Fund, Washington, DC. https://www.imf.org/external/pubs/ft/wp/2013/wp13128.pdf.

Atansah, P., M. Khandan, T. Moss, A. Mukherjee, and J. Richmond. 2017. "When Do Subsidy Reforms Stick? Lessons from Iran, Nigeria, and India." Policy Paper 111, Center for Global Development, Washington, DC. https://www.cgdev.org/sites/default/files/when-do-subsidy-reforms-stick-lessons-iran-nigeria-and-india.pdf.

Benes, K., A. Cheon, J. Urpelainen, and J. Yang. 2016. "Low Oil Prices: An Opportunity for Fuel Subsidy Reform." International Growth Center (blog), January 18, 2016. https://www.theigc.org/blog/low-oil-prices-an-opportunity-for-fuel-subsidy-reform/.

Breisinger, C., A. Mukashov, M. Raouf, and M. Wiebelt. 2019. "Energy Subsidy Reform for Growth and Equity in Egypt: The Approach Matters." *Energy Policy* 129 (June): 661–71. https://www.sciencedirect.com/science/article/pii/S0301421519301491#bib4.

Ciminelli, G., D. Furceri, J. Ge, J. Ostry, and C. Papageorgiou. 2019. "The Political Costs of Reforms: Fear or Reality?" Staff Discussion Note 19/08, International Monetary Fund, Washington, DC. https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2019/10/17/The-Political-Costs-of-Reforms-Fear-or-Reality-48735.

Coady, D., I. Parry, N.-P. Le, and B. Shang. 2019. "Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates." Working Paper 19/89, Fiscal Affairs Department, International Monetary Fund, Washington, DC. https://www.imf.org/en/Publications/WP/Issues/2019/05/02/Global-Fossil-Fuel-Subsidies-Remain-Large-An-Update-Based-on-Country-Level-Estimates-46509.

Costella, C., A. McCord, M. van Aalst, R. Holmes, J. Ammoun, and V. Barca. 2021. "Social Protection and Climate Change: Scaling Up Ambition." Social Protection Approaches to COVID-19 Expert Advice Service(SPACE),London.https://socialprotection.org/discover/publications/space-social-protection-and-climate-change-scaling-ambition.

Cunningham, W., and A. Schmillen. 2021. "The Coal Transition: Mitigating Social and Labor Impacts." Social Protection and Jobs Discussion Paper 2105, World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/35617.

Enriquez, S., B. Larsen, and E. Sánchez-Triana. 2018. "Local Environmental Externalities due to Energy Price Subsidies—A Focus on Air Pollution and Health: Energy Subsidy Reform Assessment Framework (ESRAF) Good Practice Note 8." ESMAP, World Bank Group, Washington, DC. http://documents.worldbank.org/curated/en/677081531112268818/pdf/ESRAF-note-8-Local-Environmental-Externalities-due-to-Energy-Price-Subsidies-A-Focus-on-Air-Pollution-and-Health.pdf

Findex. 2017. "The Global Findex Database." https://www.worldbank.org/en/publication/globalfindex.

Flochel, T., and S. Gooptu. 2017. "Guidance for Comprehensive Energy Subsidy Reforms: Energy Subsidy Reform Assessment Framework (ESRAF) Good Practice Notes, Overview." ESMAP Paper, Energy Sector Management Assistance Program, World Bank Group, Washington, DC. https://esmap.org/energy_subsidy_esraf_assessmentframework_overview.

Gallina, A., G. Inchauste, P. Isa, C. Lee, and M. Sánchez. 2017. "The Dominican Republic: From Generalized to Targeted Subsidies." In *The Political Economy of Energy Subsidy Reform*, edited by G. Inchauste and D. Victor, 45–94. Washington, DC: World Bank.

Gelb, A., and Associates. 1988. *Oil Windfalls: Blessing or Curse?* Oxford, U.K.: Oxford University Press.

Gelb, Alan, N. Mittal, and A. Mukherjee. 2019. "Towards Real-Time Governance: Using Digital Feedback to Improve Service, Voice, and Accountability." CGD Note, Center for Global Development, November. https://www.cgdev.org/sites/default/files/towards-real-time-governance-using-digital-feedback-improve-service-voice.pdf.

Gelb, A., and A. Mukherjee. 2019. "Fuel Subsidy Reform and Green Taxes: Can Digital Technologies Improve State Capacity and Effectiveness?" Policy Paper 149, Center for Global Development, Washington, DC. https://www.cgdev.org/sites/default/files/fuel-subsidy-reform-and-green-taxes-can-digital-technologies-improve-state-capacity.pdf.

Gentilini, U., M. Almenfi, J. Blomquist, P. Dale, L. De la Flor Giuffra, V. Desai, M. B. Fontenez, G. Galicia, V. Lopez, G. Marin, I. V. Mujica, H. Natarajan, D. Newhouse, R. Palacios, A. P. Quiroz, C. Rodriguez Alas, G. Sabharwal, and M. Weber. 2021. "Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures." Living paper, Version 15 (May 14, 2021), World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/33635.

Gentilini, Ugo, M. Almenfi, H. T. Iyengar, Y. Okamura, E. R. Urteaga, G. Valleriani, J. V. Muhindo, and S. Aziz. 2022. "Tracking Global Social Protection Responses to Price Shocks: Living Paper." Social Protection and Jobs Discussion Paper 2208, World Bank, Washington, DC. https://openknowledge.worldbank.org/entities/publication/48c8d685-21bb-5841-b754-de49f1b0c08b.

Gooptu, S. 2019. "Good Practice Note 2: Assessing the Fiscal Cost of Subsidies and Fiscal Impact of Reform." ESRAF Practice Note, World Bank, Washington, DC. https://documents1.worldbank.org/curated/en/958771530881102150/pdf/ESRAF-note-2-Assessing-the-Fiscal-Cost-of-Subsidies-and-Fiscal-Impact-of-Reform.pdf.

Gupta, S., M. Verhoeven, R. Gillingham, C. Schiller, A. Mansoor, and J. P. Cordoba. 2000. *Equity and Efficiency in the Reform of Price Subsidies: A Guide for Policymakers.* Washington, DC: International Monetary Fund.

IEA (International Energy Agency). 2021. "Energy Subsidies: Tracking the Impact of Fossil-Fuel Subsidies." IEA. https://www.iea.org/topics/energy-subsidies.

———. 2023. “Fossil Fuels Consumption Subsidies 2022” https://www.iea.org/reports/fossil-fuels-consumption-subsidies-2022

ILO (International Labour Organization). 2020. *Social Protection Responses to COVID-19 in Asia and the Pacific: The Story So Far and Future Considerations*. Bangkok, Thailand: ILO. https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/publication/wcms_753550.pdf.

IMF (International Monetary Fund). 2013. “Case Studies on Energy Subsidy Reform: Lessons and Implications.” IMF, Washington, DC. https://www.imf.org/external/np/pp/eng/2013/012813a.pdf.

———. 2021. Fossil Fuel Subsidies by Country and Fuel Database. https://www.imf.org/en/Topics/climate-change/energy-subsidies.

Inchauste, G., and D. Victor, eds. 2017. *The Political Economy of Energy Subsidy Reform*. Directions in Development. Washington, DC: World Bank. https://openknowledge.worldbank.org/bitstream/handle/10986/26216/9781464810077.pdf.

Inchauste, G., D. Victor, and E. Schiffer. n.d. “Good Practice Note 9: Assessing the Political Economy of Energy Subsidies to Support Policy Reform Operations.” ESRAF Practice Note, World Bank, Washington, DC. https://documents1.worldbank.org/curated/en/976071531112775611/pdf/ESRAF-note-9-Assessing-the-Political-Economy-of-Energy-Subsidies-to-Support-Policy-Reform-Operations.pdf.

IPCC (Intergovernmental Panel on Climate Change). 2014. *Climate Change 2014: Mitigation of Climate Change*. New York: Cambridge University Press. https://www.ipcc.ch/report/ar5/wg3/.

Kojima, M. 2016. “Fossil Fuel Subsidy and Pricing Policies: Recent Developing Country Experience.” Policy Research Working Paper 7531, World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/23631.

———. 2017. “Energy Subsidies: Identifying and Quantifying Energy Subsidies.” ESRAF Good Practice Note 1, Energy Subsidy Reform Assessment Framework, World Bank Group, Washington, DC. https://openknowledge.worldbank.org/bitstream/handle/10986/28926/121475-ESM-PUBLIC-ESRAFReportNotev.pdf?sequence=4.

———. 2021. “Subsidizing Bottled Gas: Approaches and Effects on Household Use.” Energy Sector Management Assistance Program, World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/35948.

———. 2022. *Cooking with Bottled Gas: Issues and Challenges in Developing Countries.* Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/38418.

Lindebjerg, E., W. Peng, and S. Yeboah. 2015. “Do Policies for Phasing Out Fossil Fuel Subsidies Deliver What They Promise? Social Gains and Repercussions in Iran, Indonesia and Ghana.” Working Paper 2015-1, United Nations Research Institute for Social Development, Geneva. https://www.files.ethz.ch/isn/186871/Lindebjerg%20et%20al.pdf.

McCulloch, N., D. Natalini, N. Hossain, and P. Justino. 2021. “An Exploration of the Association between Fuel Subsidies and Fuel Riots.” Working Paper 556, Institute of Development Studies, Brighton, UK. https://www.ids.ac.uk/publications/an-exploration-of-the-association-between-fuel-subsidies-and-fuel-riots/.

Mittal, N., A. Gelb, and A. Mukherjee. 2017. “Fuel Subsidy Reform in Developing Countries: Direct Benefit Transfer of LPG Cooking Gas Subsidy in India.” Policy Paper 114, Center for Global Development, Washington, DC. https://www.cgdev.org/sites/default/files/fuel-subsidy-reform-developing-countries-india.pdf.

OECD (Organisation for Economic Co-operation and Development). 2022. "Support for Fossil Fuels Almost Doubled in 2021, Slowing Progress toward International Climate Goals, According to New Analysis from OECD and IEA." OECD Newsroom, August 29, 2022. https://www.oecd.org/newsroom/support-for-fossil-fuels-almost-doubled-in-2021-slowing-progress-toward-international-climate-goals-according-to-new-analysis-from-oecd-and-iea.htm.

Parry, I., S. Black, and N. Vernon. 2021. "Still Not Getting Energy Prices Right: A Global and Country Update of Fossil Fuel Subsidies." Working Paper 2021/236, International Monetary Fund, Washington,DC.https://www.imf.org/en/Publications/WP/Issues/2021/09/23/Still-Not-Getting-Energy-Prices-Right-A-Global-and-Country-Update-of-Fossil-Fuel-Subsidies-466004.

Pfund, N., and B. Healy. 2011. "What Would Jefferson Do? The Historical Role of Federal Subsidies in Shaping America's Energy Future." DBL Investors. https://www.dbl.vc/wp-content/uploads/2012/09/What-Would-Jefferson-Do-2.4.pdf?597435=&48d1ff=.

Ruppert Bulmer, E., K. Pela, A. Eberhard-Ruiz, and J. Montoya. 2021. *Global Perspective on Coal Jobs and Managing Labor Transition Out of Coal: Key Issues and Policy Responses*. Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/37118.

Sadiki, L. 1997. "Towards Arab Liberal Governance: From the Democracy of Bread to the Democracy of the Vote." *Third World Quarterly* 18 (1): 127–48.

Silva, J., V. Levin, and M. Morgandi. 2013. *Inclusion and Resilience: The Way Forward for Social Safety Nets in the Middle East and North Africa*. MENA Development Report. Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/14064.

Vagliasindi, M. 2012. *Implementing Energy Subsidy Reforms: Evidence from Developing Countries*. Washington, DC: World Bank. https://doi.org/10.1596/978-0-8213-9561-5.

World Bank. 2018. *Program Document for Dominican Republic—Second Performance and Accountability of Social Sectors Development Policy Loan Program*. World Bank, Washington, DC

———. 2022. Program Document for Dominican Republic—Electricity Reform for Sustainable Growth Development Policy Financing. World Bank, Washington DC

Worley, H., S. Pasquier, and E. Canpolat. 2018. "Designing Communication Campaigns for Energy Subsidy Reform." ESRAF Good Practice Note 10, ESMAP, World Bank, Washington, DC. https://documents1.worldbank.org/curated/en/939551530880505644/pdf/ESRAF-note-10-Designing-Communication-Campaigns-for-Energy-Subsidy-Reform.pdf.

Yemtsov, R. G., and A. S. Moubarak. 2018. "Good Practice Note 5: Assessing the Readiness of Social Safety Nets to Mitigate the Impact of Reform." World Bank, Washington, DC. https://documents1.worldbank.org/curated/en/180951530884246896/pdf/ESRAF-note-5-Assessing-the-readiness-of-Social-Safety-Nets-to-Mitigate-the-Impact-of-Reform.pdf.

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