

# **Lessons learnt from the fossil fuel price reform in Ghana**

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## **Executive Summary**

The petroleum industry in Ghana is the largest industry currently in infrastructure monetary terms. Ghana discovered economic oil and gas in large quantities in 2007 and in 2010, and then the country commissioned the production of crude oil and natural gas. Ghana is still a net importer of petroleum products despite being a petroleum producer. This is not because of insignificant production but purely due to no available midstream sector infrastructure facilities to engage in petroleum processing, refining, as well as transporting final products to achieve energy sufficiency and security. ([Ghana National Petroleum Corporation, 2008](#))

Until about two decades ago, the state-owned Tema Oil Refinery (TOR) bore the cost of the subsidy and underpricing of petroleum products which saddled it with massive losses. Since 2004, deregulation has allowed oil marketing companies to enter the market for importing and distributing crude oil and petroleum products. This has resulted in increased demand and cheaper oil prices due to competition. Since October 2010, a hedging scheme using call options also provided some temporary protection against upward movements in oil prices. The state purchases monthly call options that generate revenues in the event of upside shocks to world oil prices; these revenues are used to cover temporary delays in adjusting domestic petroleum product prices to cost-recovery levels (IMF, 2011)

This article analyses the fossil fuel price reforms in Ghana and seeks to explain the reasons for the removal of subsidies and the deregulation of the sector.

## Introduction

Fossil fuel comprises coal, oil, petroleum, and natural gas products. The elimination of fossil-fuel subsidies is a crucial step towards reducing CO<sub>2</sub> emissions. Fuel subsidies differ from country to country. They were intended to lower fuel prices for consumers, increase welfare, and improve the relationship between the government and its citizens. While easy to implement, they can be extremely expensive, often ineffective in targeting the poorest, and difficult to sustain or remove.

Ghana is a sub-Saharan African country with a population of 30.8 million (Ghana Statistical Service, 2021) people who depend largely on fossil fuel as a major part of the country's energy mix. Currently, Ghanaian economy depends hugely on petroleum, which, since 2000, contributes 80% to the total energy mix, not counting biomass.

Ghana is a small oil and natural gas producer in West Africa that exports its crude oil production to international markets. The country's natural gas production is used to fuel its domestic power plants. Having relied on biomass and wood fuel, the share of biomass in Ghana's energy mix has been steadily declining due to increasing fossil fuel consumption.

Fossil fuel energy consumption increased from 18.8% of the total energy consumption in 1995 to 52.5% in 2014 growing at an average annual rate of 5.83%. As of 2020, it has increased to about 87.5%. According to the national energy statistics, the share of biomass consumption declined from 52% of total primary energy supply in 2009 to 37% in 2016.

Road transport is the predominant mode of transport in Ghana. There are buses between all cities and major towns and saloon cars taxiing between communities. The number of newly registered cars per year increased from 235,000 in 1995 to about 1,465,000 in 2019. Reports show there were about 6.5 million cars registered in Ghana between 2005 and 2015 alone (graph below). Due to the number of vehicles in the country and the role they play, fuel prices have been a matter of political interest and thus suffered several major reforms. Ghana's history of fuel subsidy reform has been marked by progressive steps interrupted by severe setbacks, causing large swings in the size of subsidies, and offers valuable lessons.

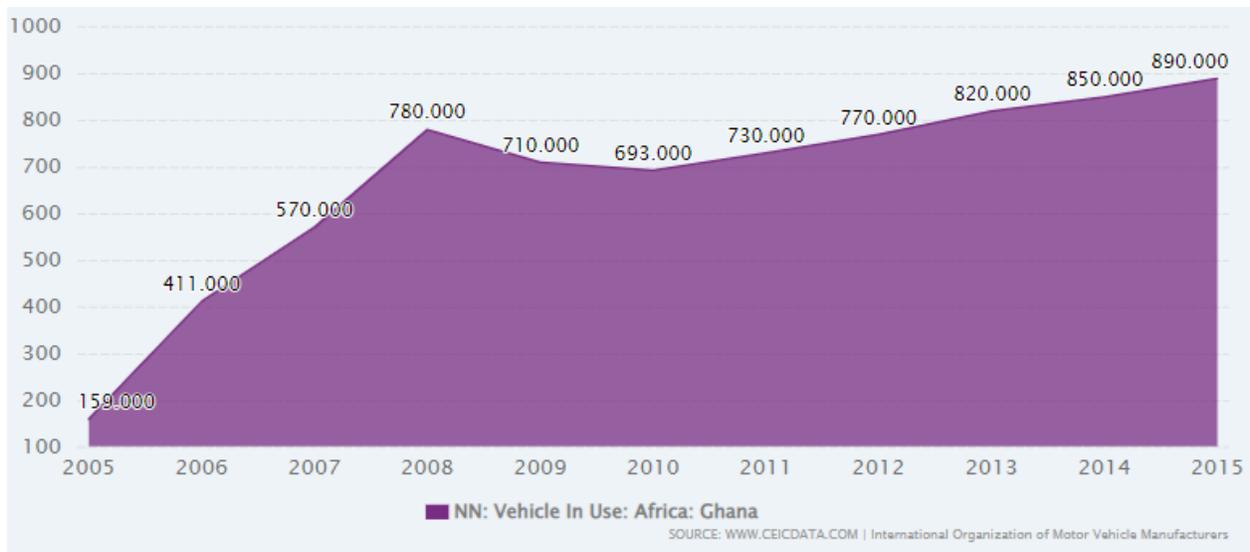


Figure 1. Registered Motor Vehicles in Ghana from 2005 to 2015. Source: [www.ceicdata.com](http://www.ceicdata.com) / International Organization of Motor Vehicle Manufacturers

### Ghana's first fuel price liberalization experience

The first attempt to reform happened in line with a wider IMF Poverty Reduction and Growth Facility Programme. The Government of Ghana regulated the prices of petroleum products until 2001. Its failure to adjust prices in response to the unforeseen hike in the world crude oil price led to debt accumulation by the state owned Tema Oil Refinery (TOR). The Automatic Petroleum Product Pricing Formula (APPPF), a much more market-efficient approach to pricing, was therefore adopted in June 2001, with the National Petroleum Authority (NPA) in charge of determining the prices in line with the formula and that led to the suspension of subsidies.

The subsidies were reinstated by late 2002 due to massive protests by the public because of high prices. The Automatic Petroleum Product Pricing Formula (APPPF) was reintroduced in 2003, causing an almost doubling of the domestic price of fuel and was again abandoned following public pressure. Ghana in 2004 experienced serious fiscal constraints and stopped subsidizing petroleum products due to persistent high oil prices. In 2005 the government set price ceilings in line with world prices, leading to a 50 percent fuel price increase. (Vagliasindi M. 2013)

## Subsidy Removal & New Reform

During the 2007–2008 global fuel and food crisis and in the run-up to the 2008 elections, automatic adjustment was suspended.

In June 2015, the much-anticipated price deregulation of petroleum products was implemented. This marked a great step towards the full deregulation of the downstream petroleum sector and made a breakthrough in the petroleum deregulation policy. The NPA ceded its power in the pricing of petroleum products, allowing the Bulk Oil Distribution Companies (BDCs) and the Oil Marketing Companies (OMCs) to price their own products.

**Table 1. Summary of benefits of the deregulation enjoyed by government, Oil Marketing Companies (OMCs), and consumers:**

<b>Government</b>	<b>OMCs</b>	<b>Consumers</b>
Saving in administration and management cost of the APPPF	Ability to determine prices of petroleum products	Symmetrical pricing which effectively reflects the value of the cedi and world market price
Improvement in budget deficit	Improvement in efficiency to reduce cost of production in order to remain competitive	Lower prices of petroleum products without affecting the quality
Effective investment in social welfare programmes	Opportunity to increase market share in the petroleum sector	Improvement in socio economic conditions due to the government social welfare programmes
Gain of tax revenue loss previously from illegal export of petroleum products		Increase in choices and options

Source: [www.cuts-international.org/ARC/Accra](http://www.cuts-international.org/ARC/Accra) Briefing Paper No. 1/2015. Will the Deregulation of the Petroleum Sector Result in Competition?

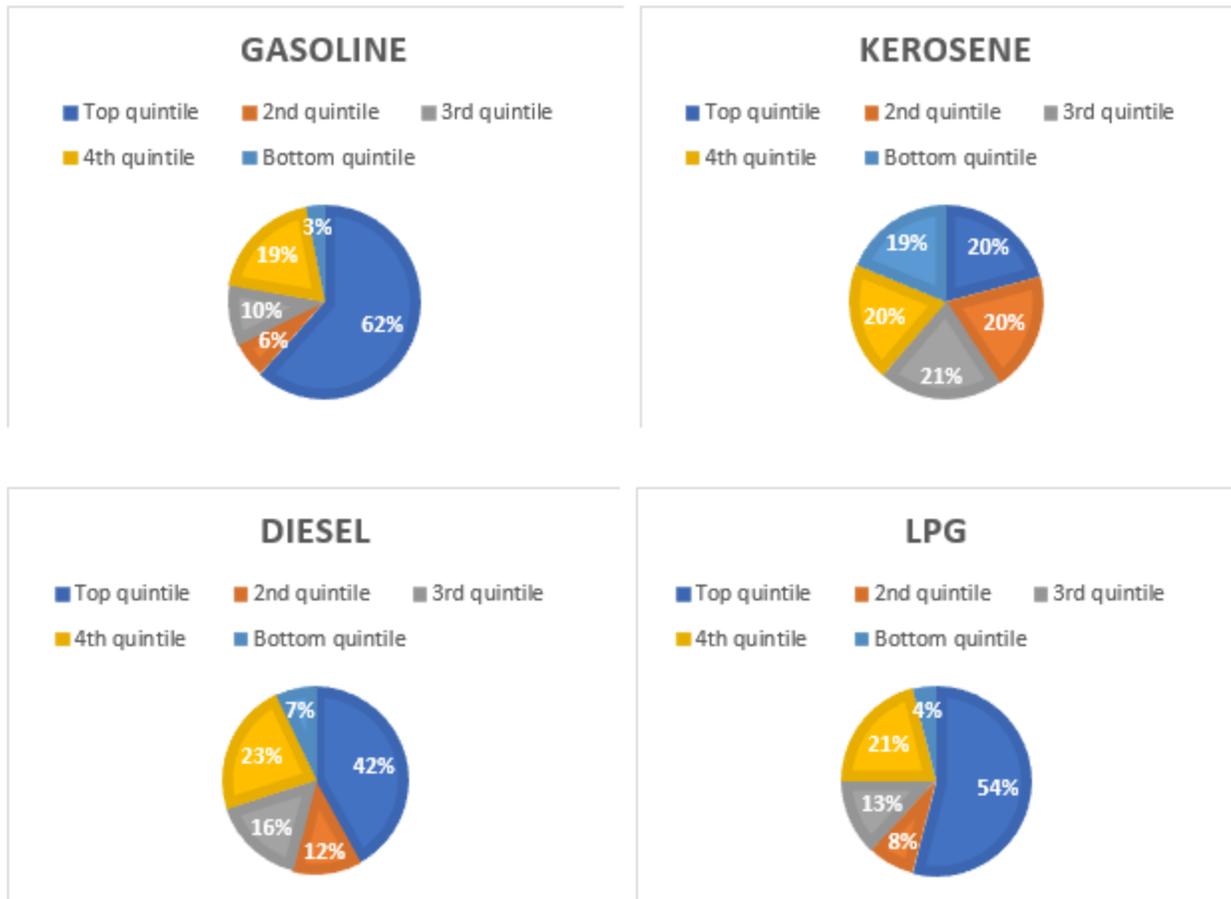
## Mitigating Measures

The deregulation of petroleum product pricing in 2005 was accompanied by strategic measures to support the reform. The strategy included research, communication, and programs to mitigate the impact on the most vulnerable groups, all of which contributed to its successful implementation.

### *Research*

The government launched a Poverty and Social Impact Assessment (PSIA) for fuel, including all stakeholders. The PSIA found that price subsidies predominantly benefitted the better-off in society (Coady and Newhouse, 2006).

Figure 2 and Table 2 below provides a summary of the results in Coady and Newhouse (2006). It shows that the top income quintile (the richest 20% of the population) receives 62% of the subsidy on gasoline and 42% of the subsidy on diesel, while the bottom quintile (the poorest 20%) receives only 3% and 7%, respectively. It also shows that the largest negative impact of subsidy removal on household consumption is experienced by the bottom income quintile, who witness a 9.1% decline in their welfare. This clearly is a major impact for families who already live under the poverty line which underlines that they should be compensated. Although the decline for the rich households is not much lower as expressed in percentage, evidently, they will not be much worse off. As Marcelo Giugale, a Senior Director of World Bank put it: “Not that the amount of driving, lighting, or heating done by the rich would change much if they had to pay the full cost of the energy they consume—they are just happy to pay less and pocket the difference.” (MyJoyOnline 2015)



Source: Arze del Granado, Coady, and Gillingham, 2012.

Figure 2. Distribution of Petroleum Product Subsidies by Income Groups (Percent of total product subsidies) The distribution of subsidies varies across products, with gasoline being the most regressive and kerosene the most progressive. (i.e., subsidy benefits increase as income increases)

In the case of kerosene, distribution is almost equal across the entire population. This is as a result of its extensive use. Kerosene is the dominant component of the energy budget of lower income households which account for 67% of the population.

**Table 2: Household budget shares and real income effects of subsidy withdrawal in Ghana (in %)**

Quintile	Household Budget Share			Real Income Effect		
	Petrol	Kerosene	LPG	Direct	Indirect	Total
1-Bottom	0.1	5.9	0	2.9	6.2	9.1
2	0.1	4.1	0	2	6.6	8.7
3	0.2	3.4	0	1.7	6.7	8.5
4	0.2	2.4	0.1	1.3	6.9	8.2
5-Top	2.1	1.6	0.2	1.4	6.8	8.2
Total	0.6	3.5	0.1	1.9	6.7	8.5

Source: Table 11.2 in Coady and Newhouse (2006:400) using data from GLSS round 4. The required rise in prices used in calculating the real income effects are 17%, 49%, 67%, 50% and 108% for a liter of petrol, kerosene, diesel, fuel oil and LPG (per kilo) respectively.

### *Communication*

The National Petroleum Authority strongly advocated the elimination of fuel subsidies. According to press reports, its Chief Executive Officer, Alex Mould complained that “when other companies increase the price of their products, much is not heard about it as compared to increase in prices of fuel.” He said: “We don't talk about whether Nestle is increasing Milo price...we don't talk about MTN [a mobile telecommunications company], we don't talk about why prices are increasing in certain areas, but when it comes to petrol, everyone turns to NPA as if NPA is the demon.” He called on the government and Ghanaians “to decide whether they want subsidies and if they want subsidies, they should put it in the budget and should make sure it is funded. ... “There is no cheap fuel as some people have evilly misconstrued.” (Modern Ghana 2013)

The Bank of Ghana (BoG) has also joined the clarion call on the government to stop subsidizing the prices of utilities and petroleum products, explaining that the removal of subsidies will help stabilize the macroeconomic environment leading to a rise in foreign direct investments (FDIs). The Bank of Ghana (BoG) Acting Head of Research, Mrs Grace E. Akrofi stated that “If these things are stabilized, possibly through the withdrawal of the subsidies, then we believe that more FDIs will come in and that will help grow the economy,” (Graphic Online 2013)

The World Bank and the International Monetary Fund (IMF) also came to the conclusion that fuel subsidies payments benefited the rich and not the poor and

deprive critical sectors of the economy such as health, education and infrastructure, from funding which is much needed for them to develop. (Graphic Online 2013) According to Marcelo Giugale, “a typical oil-importing nation could easily double its budget for public healthcare if it did away with fuel subsidies.”

The World Bank has also stressed that “making fuels artificially cheap is a sure—and shameful—way to accelerate the degradation of our natural environment. Think of climate change and rising sea levels and think of local traffic and air pollution: they all worsen when prices at the pump are kept artificially low.”

The government simultaneously undertook a multi-faceted media campaign which utilized radio, newspapers and high-profile politicians to make clear that the removal of subsidies would allow for an increase in social spending, which would compensate low-income groups through the provision of better targeted policies that benefit the poor. The results of the poverty and social impact assessment were made public and discussed in a dialogue with various stakeholders, including trade unions. The government also explained how resources freed from subsidizing energy products would partly be reallocated to social priorities.



A typical day in one of the Ghana Oil (Goil) filling stations in Accra, Ghana 2022 (Photo by a friend of the author)

### *Assistance to the poor*

These measures included the elimination of government run primary and junior secondary school fees; an increase in public-transport buses; a price ceiling on public-transport fares; more funding for healthcare in poor areas; an increase in the minimum wage; and investment in electrification of rural areas. (ESMAP, 2006)

As a result of adequate compensation measures, the transparency of the process of removing subsidies and the public information campaign, the public generally accepted the measures despite opposition from trade unions.

## **IMPACTS OF THE FUEL PRICE REFORM**

Since 2004, deregulation has allowed oil marketing companies to enter the market for importing and distributing crude oil and petroleum products. This has resulted in increased demand and cheaper oil prices due to competition. These reforms have been efficient and have catapulted GDP per capita growth and fueled demand. In 2013, but for the reforms, the Ghanaian Government would have spent 2.4 billion GHS (approximately 1.2 billion USD) on fuel subsidies, equaling 3.2% of GDP. (Edgar F.A. Cooke 2014)

Subsidized prices covered by the budget also provided opportunities for fraudulent claims. There were numerous ways of manipulating claimed costs, including false claims on the volume delivered, exchange rate manipulation, falsifying dates of the bills of lading, inflating storage and transportation costs, and falsifying the destination of fuel delivery (to claim longer distances). Hence the removal helped minimize these fraudulent activities (Victor D.G. 2009)

Fossil fuel subsidies contribute to increasing fuel consumption and thus GHG emissions and pollution with negative effects also on biodiversity. Moreover, investment in transport-related infrastructure in economies which have fuel subsidies will be greater than is socially optimal and results in too much conversion of natural areas and in-habitat fragmentation (Global Subsidies Initiative, 2010).

### **Current taxes on energy use**

Ghana does not have an explicit carbon tax, nor a CO<sub>2</sub> emissions trading system. However, it does collect energy taxes. There are at least seven taxes on fuel in Ghana. According to the Energy Sector Levies Act (ESLA) Act 899, 2015 and Energy Sector Levies (Amendment) Act, 2021, these include the following.

1. *Energy Fund Levy* was established to provide support for the payment of the energy sector bills, capacity charges, and feedstock.

2. *Sanitation and Pollution Levy* was established to provide revenues for

- Improving air quality in urban areas of the country and combating pollution.
- Designing, constructing and re-engineering solid and liquid waste treatment and disposal facilities including compost production facilities, recycling facilities, landfill sites, medical and other specialized waste treatment facilities.
- Constructing sanitation facilities to accelerate the elimination of open defecation.
- Supporting disinfection, disinfection and fumigation of public spaces, schools, lorry parks, health centers and markets.
- Providing dedicated support for the maintenance and management of major landfill sites and other waste treatment plants and facilities across the country.

3. *Price Stabilization and Recovery Levy* was established

- a. as a buffer for under-recoveries in the petroleum sector.
- b. to stabilize petroleum prices for consumers.
- c. to subsidize premix and residual fuel oil.

4. *Energy Sector Levy* was introduced to help pay the capacity charges in the energy sector and its bills, which includes the fuel used by power-plants to generate energy. Capacity charges are the charges imposed on new public facilities.

5. *Special Petroleum Tax* forms part of the tax measures adopted by the government to increase revenue generation and improve efficiency on revenue collection.

6. *Road Fund Levy* was established to support road maintenance.

7. *Energy Debt Recovery Levy* was established to facilitate the debt recovery of state owned Tema Oil Refinery, downstream petroleum sectors foreign exchange under recoveries and power generation and infrastructure support.)

An assessment of the current price build-up indicates that for every liter of petrol now sold at GH ¢6.90, there is a tax component of about GH ¢2.70, constituting about 40 per cent of the total price build-up illustrated below.

**Table 2. The taxes and levies and their share in fuel prices**

TAXES AND LEVIES	SHARE IN FUEL PRICE (GH CEDIS)	SHARE IN FUEL PRICE (IN USD)
Energy Debt Recovery Levy	49p	0.065
Road Fund Levy	48p	0.076
Energy Fund Levy	1p	0.0016
Price Stabilization and Recovery Levy	14p	0.022
Sanitation and Pollution Levy	10p	0.016
Energy Sector Recovery Levy	20p	0.032
Primary Distribution Margin	11p	0.018
Special Petroleum Tax	46p	0.073
BOST Margin	9p	0.04
Fuel Marking Margin	5p	0.0080
Marketers' Margin	46p	0.073
Dealers (Retailers/Operators) Margin	30p	0.048

The GDP of Ghana in 2018 is 68.52 billion USD and the net energy tax revenue represents 1.6 percent of the GDP contributing positively to domestic resource mobilization as tax exceeds subsidies. (Bank of Ghana, 2020)

### **Current Fuel Prices in Ghana**

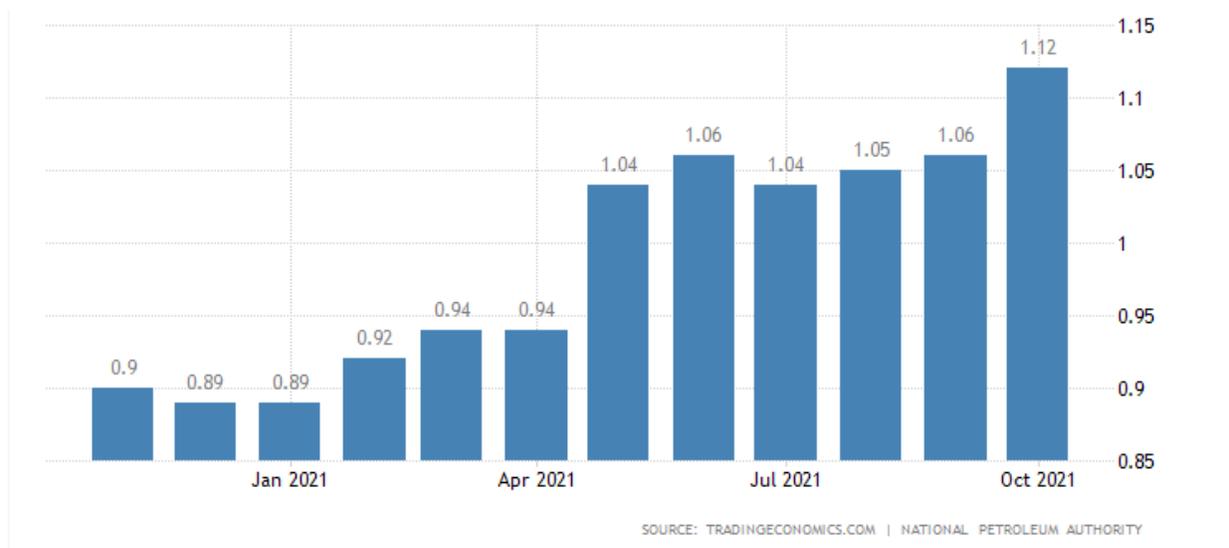
Management of the National Petroleum Authority (NPA) has released its average fuel price for 2021. The data available indicates an average fuel price from 1<sup>st</sup> January 2021 to 5th November 2021. The table below shows the current price of fuel in Ghana as of 5th November 2021.

**Table 3. Current price of fuel in Ghana as of 5th November 2021**

FUEL	PRICE IN GH CEDIS	PRICE IN USD
Diesel	GH¢ 6.90	1.10 USD
Super	GH¢ 6.90	1.10 USD
Kerosene	GH¢ 6.39	1.02 USD

Gasoline prices in Ghana increased to 1.12 USD/Liter in October from 1.06 USD/Liter in September of 2021. Source: National Petroleum Authority.

Figure 3. Gasoline prices (USD/Liter) in Ghana from November 2020 to October 2021



The NPA on October 11, 2021, disclosed that President Akufo-Addo had approved the removal of the Price Stabilization and Recovery Levies (PRSL) on petrol, diesel, and LPG for two months.

## Conclusion

There is absolute confidence that abandoning fuel subsidies will benefit the economy and also the planet, but as protests in Ghana over the years show, reforms require careful design and considerate execution to look out for the most vulnerable as well as get citizens on board. Doing so effectively isn't as easy as drafting a new

legislation, announcing the change, and sitting back to a round of applause. If done too hastily, scrapping such subsidies can result in widespread political unrest.

Fossil-fuel subsidies are an inefficient means of protecting the incomes of poor households. It is true these subsidies reduce living costs for the poorest in society, but do not represent a cost-efficient means of achieving this. A bigger proportion of the advantages which accrue from fossil-fuel subsidies are captured by higher-income groups. In this kind of situation, a conditional cash transfer program offers a more efficient means of assisting the poor.

Effective and targeted communications are critical for building a public case for fossil-fuel subsidy reform. I believe this approach will lessen the clash back and give room for dialogues which will answer the concerns of the general public and stakeholders and also inform the government the real reasons behind the public uproar. People often get agitated due to the fear of the unknown.

Budapest, 21 February 2022

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