



**A CITIZENS' GUIDE  
TO ENERGY SUBSIDIES  
IN BANGLADESH**



PRODUCED BY THE BANGLADESH INSTITUTE OF DEVELOPMENT STUDIES AND  
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**Head Office:** 161 Portage Avenue East, 6th Floor, Winnipeg, Manitoba, Canada R3B 0Y4  
Tel: +1 (204) 958-7700 | Fax: +1 (204) 958-7710 | Web site: [www.iisd.org](http://www.iisd.org)

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**International Institute for Sustainable Development**  
**Global Subsidies Initiative**

International Environment House 2, 9 chemin de Balexert, 1219 Châtelaine, Geneva, Switzerland  
Tel: +41 22 917-8373 | Fax: +41 22 917-8054 | Web site: [www.iisd.org/gsi](http://www.iisd.org/gsi)

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## Introduction

The Government of Bangladesh, like many countries around the world, has used subsidies for decades to promote a wide range of social and economic objectives. The government provides subsidies in a number of areas, including agriculture, petroleum products, electricity, health, education and food.

Subsidies have wide-ranging impacts on the distribution of wealth within a country, economic growth and the environment. As such, they are of vital interest to all citizens. Too often, however, there is little public awareness or discussion of subsidy policies, and thus the true benefits and drawbacks of subsidies are often poorly understood.

The focus of this guide is energy subsidies, which receive a large share of subsidy spending in Bangladesh. Bangladesh started subsidizing the retail prices of energy products following independence in 1971. Today, with soaring global fuel prices and rapidly rising demand for fuels, these subsidies take a heavy toll on government finances.

This guide is intended to help citizens understand energy subsidies in Bangladesh. The term “energy” includes all commercial types (e.g., electricity, petroleum products, natural gas, diesel, kerosene and furnace oil) for which the government provides subsidies. The guide discusses the size of subsidies to different energy types, the segments of society that benefit the most, and how they affect the country’s economy and environment. It also highlights the process of reforming energy subsidies, drawing on the experience of Bangladesh and other developing countries.



# AN OVERVIEW OF ENERGY SUBSIDIES



## 1. An Overview of Energy Subsidies

### 1.1 What is an Energy Subsidy?

Energy subsidies are commonly defined as “any government action that lowers the cost of energy production, raises the revenues of energy producers or lowers the price paid by energy consumers” (International Energy Agency, Organization for Economic Co-operation and Development & World Bank, 2010). As the definition implies, energy subsidies come under two main categories: those designed to reduce the cost of consuming energy and those aimed at supporting domestic production (Burniaux et al., 2009, as cited in Ellis, 2010). Producer subsidies are common in developed and developing countries, while consumer subsidies tend to exist on a much larger scale in developing countries.

Subsidies may be provided to the energy sector through many mechanisms, including:

- direct financial transfers to producers or consumers
- retail prices set at below-market value
- low interest or preferential loans and government loan guarantees
- preferential tax treatments, such as tax credits, tax rebates, reduced tax rates, deferred tax
- liabilities and accelerated depreciation on energy supply equipment
- trade restrictions, including tariffs and non-tariff trade barriers
- energy-related services provided by the government at less than their full cost
- regulation of the energy sector, such as price controls, demand and purchase guarantees, environmental regulations, market access restrictions

**An increase in energy costs can have a disproportionate impact on poorer citizens if adequate social safety nets are not in place.**



## 1.2 Why Does Bangladesh Subsidize Energy?

A strong rationale for subsidizing energy is to support access to energy for the poor. While there is some degree of truth to this argument, energy subsidies often benefit wealthier segments of society disproportionately, given that they use more energy. This is true in Bangladesh, where the poor are mostly dependent on traditional biomass and have little access to electricity and other public utilities. Energy subsidies also divert public funds from social programs and welfare schemes that may be of greater benefit to the poor. Nonetheless, an increase in energy costs can have a disproportionate impact on poorer citizens if adequate social safety nets are not in place.

Governments also provide energy subsidies to support important parts of the economy. For instance, energy subsidies play a critical role in Bangladesh's agriculture sector, which employs nearly half of the country's labour force. Bangladesh's agricultural sector depends heavily on energy-intensive irrigation, especially during the dry season. Nearly 87 per cent of the irrigation equipment is run on diesel, accounting for nearly 71 per cent of the area under mechanized irrigation. Naturally, shortages or price hikes in power or fuel lead to higher production costs and, subsequently, to higher market prices for agricultural products, particularly rice, the staple food.

## 1.3 Bangladesh's Energy Subsidies

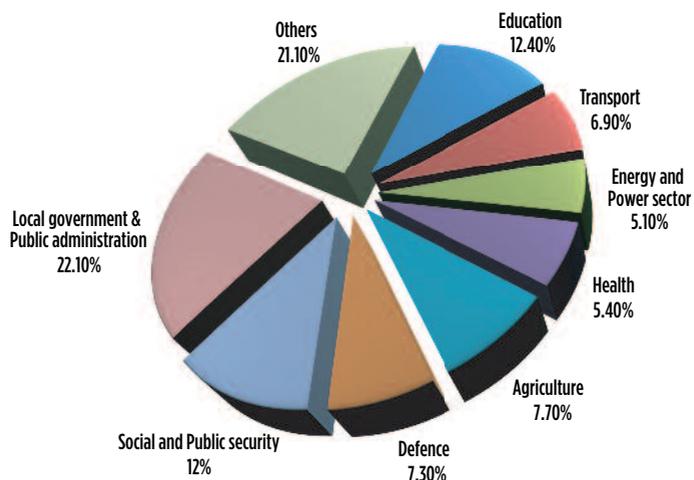
Bangladesh's total subsidies for the 2012 fiscal year (FY) amount to nearly BDT320 billion (US\$ 3.9 billion). This is more than 4 per cent of the gross domestic product (GDP) and nearly a quarter of the total budget (Table 1), equivalent to what the government spends on education and more than health and social welfare expenditures (Figure 1). Total energy subsidies for the FY 2012 are estimated at more than BDT282 billion (US\$3.4 billion), almost 90 per cent of the total amount spent on all subsidies. Nearly 34 per cent of these subsidies are off-budget, such as government loans for Bangladesh Power Development Board at favourable lending rates.

Table 1 » Total Subsidies in Bangladesh During FY 2012 (July 1, 2011–June 30, 2012)

Products	Total cost (billion BDT)	Total sales revenue (billion BDT)	Total subsidy (billion BDT)	Total subsidy (million US\$)
Power	79.04	70.59	8.45	115.6
Power (rental power plants)	...	...	123.56	1,690.3
Natural gas	100.1	103.6	-3.46	-47.3
Petroleum	572.6	418.8	153.8	2,103.7
Fertilizer	...	...	19.8	271.3
Food (consumption)	...	...	17.5	239.8
Total	...	...	319.7	4,373.4

Source: Figures are based on unpublished data provided by the World Bank.

Figure 1 » Broad sectoral composition of public expenditure: Budget FY 2012



Energy subsidies result from the government setting retail prices for fuel and electricity at much lower than market prices. Although the government periodically adjusts prices to bring them closer to world market levels, subsidies have remained substantial (Table 3). The following sections examine subsidies to different types of fossil fuels and electricity.

Table 2 » Domestic Retail Prices of Petroleum Products

Petroleum products	Dec 1998	Aug 2000	Dec 2001	Jan 2002	As on						
					Jan 2003	Jun 2004	Jan 2005	Sep 2005	Jun 2006	Apr 2007	Nov 2011
Kerosene (BDT/L)	12.66	15.17	16.67	16.67	16.83	16.83	22.52	29.37	32.37	40.00	56.00
Diesel (BDT/L)	13.40	16.22	17.60	17.60	19.71	19.71	22.01	28.00	28.00	40.00	56.00
Furnace oil (BDT/L)	5.00	6.50	12.50	12.50	10.00	12.00	12.00	14.00	14.00	20.00	55.00
Natural gas, average (BDT/1,000Cft)	54.66	62.87	62.87	65.99	70.00	70.00	73.91	73.91	73.91	73.91	...

Source: Figures are based on unpublished data provided by the Ministry of Energy and Mineral Resources, Government of Bangladesh.

Although the government periodically adjusts prices to bring them closer to world market levels, subsidies have remained substantial.

Table 3 » Estimated Energy Subsidies in FY 2012

	Cost per unit (BDT)	Selling price per unit (BDT)	Profit/loss per unit (BDT)	Quantity (million units)	Total subsidies (billion BDT)
<b>1. Power</b>	<b>3.1</b>	<b>2.9</b>	<b>-0.12</b>	<b>25,747.3</b>	<b>8.45</b>
Residential	3.1	3.3	0.24	2,557.7	-0.27
Agricultural	3.1	1.9	-1.16	151.1	0.18
Industrial	3.1	4.4	1.29	2,109.2	-2.35
Commercial	3.1	6.0	2.98	645.5	-1.77
Bulk	3.1	2.7	-0.41	2,0136.5	12.77
Others	3.1	3.9	0.83	147.4	-0.10
<b>2. Rental power plants</b>	...	...	...	...	<b>123.56</b>
<b>3. Gas</b>	...	...	...	<b>705.5 (BCF)</b>	<b>-3.46</b>
National	65.1	147.3	82.2	331.6 (BCF)	-27.1
International gas companies	210.0	147.3	-52.7	373.9 (BCF)	23.6
<b>4. Petroleum</b>	...	...	...	<b>8,183.0 (m Lit.)</b>	<b>153.8</b>
Petrol	88.5	81.0	-7.5	152.0	1.3
Octane	89.5	84.0	-5.5	111.1	0.7
Diesel	79.4	51.0	-28.4	4,007.6	116.9
Kerosene	79.6	51.0	-28.6	508.5	14.9
JP-1	79.5	61.0	-18.5	368.2	6.8
Furnace oil	52.9	50.0	-2.9	3,035.6	13.2
<b>5. Total fossil-fuel subsidies</b>	...	...	...	...	<b>282.35</b>

Source: Figures are based on unpublished data provided by the World Bank.



### 1.3.1 Fuel Oil

Bangladesh has small proven oil reserves, and thus imports much of its oil products. In the domestic market, petroleum prices are subsidized and administratively fixed by the government.

The price of kerosene was raised in November 2011 from BDT40/litre to BDT56/litre (US\$0.49–\$0.68). With average annual consumption of 508.5 million litres, the total subsidy for 2012 is expected to amount to BDT14.9 billion (US\$182 million). Kerosene is largely consumed by low-income households for lighting and cooking.

The average annual consumption of diesel is 4,007.6 million litres, most of which is used for operating irrigation equipment. The total subsidy for diesel for 2012 is estimated to be BDT116.9 billion (US\$1.4 billion), which is the highest amongst the petroleum subsidies.

The average annual consumption of petrol is 152 million litres, most of which is used for transportation. The amount of subsidy is expected to be BDT1.39 billion (US\$16.9 million) during FY 2011–12. Finally, average annual consumption of furnace oil, which is mainly used as fuel for electricity generation, is 3,035.6 million litres, and the subsidy amounts to BDT13.2 billion (US\$161 million).

### 1.3.2 Natural Gas

Natural gas is Bangladesh's only significant source of commercial energy, and is expected by some independent analysts to grow by around 6 per cent annually over the next two decades. Potential uses for natural gas in Bangladesh include petrochemicals, compressed natural gas (CNG) for vehicles, power generation and fertilizer production. Bangladesh also possesses around 55 million barrels of natural gas liquids, which could be used for petrochemical production or as a cooking fuel. Production of natural gas liquids is currently about 200 billion barrels per day (bbl/d).

Bangladesh periodically raises the price of natural gas as part of its efforts to reduce subsidies. Still, natural gas prices in the country are relatively low by international standards, with electricity consumers, the fertilizer industry and household consumers receiving most of the benefits. Unfortunately, there are no available estimates for the cost of these subsidies.

### 1.3.3 Electricity

Electricity is a scarce service in Bangladesh. In a country of around 160 million people, electricity is used by only about 55 per cent of the households, mostly in urban areas. Only 43 per cent of rural households have access to electricity.

Natural gas, diesel oil, furnace oil, coal and hydro are the major types of fuel that are used in electricity generation in Bangladesh. From 1972 to 2008, gross electricity generation increased from less than one terawatt hour (TWH) to more than 25 TWH. By official accounts, electricity generation has grown at 7.5 per cent per year, but in reality the growth may have been lower—more likely 4 to 5 per cent over the 1976–2003 period (Asaduzzaman & Mansur, 2011).

The provision of low-cost electricity has played a critical role in growth and development of the Bangladesh economy. Although the per-unit supply cost of electricity has risen over time, the rate of increase is rather small. However, due to rapidly rising demand for electricity, the Bangladesh Power Development Board (BPDB) has recently taken steps to install new power plants and to purchase electricity from independent power producers to meet power shortages on an emergency basis.

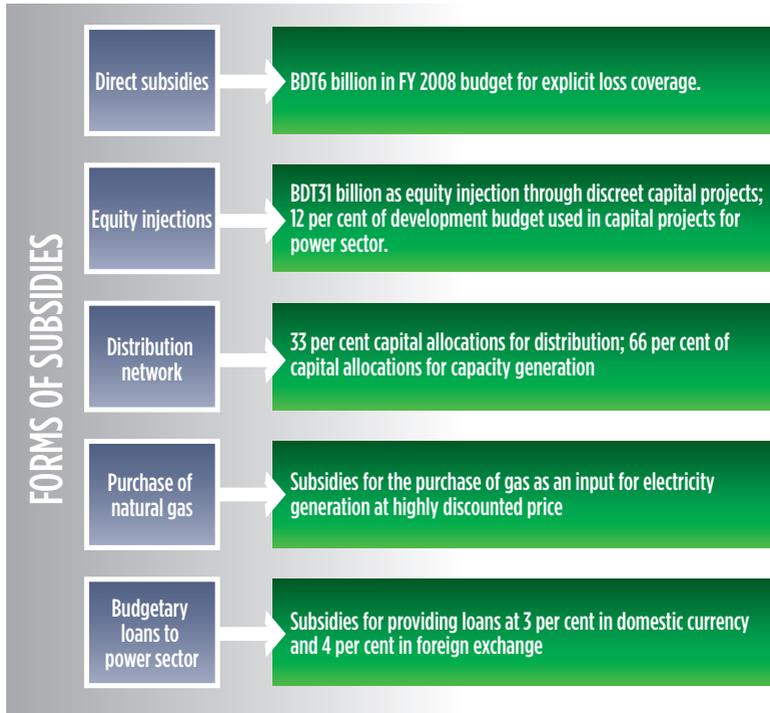
As the selling price has fallen behind the rising cost of electricity supply over the years, the government provided the BPDB with loans of BDT10 billion (US\$122 million) every two months in 2007, BDT60 billion (US\$734 million) each year from 2008 to 2009, and BDT39.4 billion (US\$482 million) in 2010 to purchase electricity from rental producers. Considering the rising supply cost of electricity, the bulk electricity tariff rate has recently increased to reduce BPDB's losses. As a result, the bulk price of per-unit electricity increased from BDT2.37 to BDT2.61 (US\$0.029–\$0.032) in February 2011.

At present, an acute shortage of electricity has emerged as a major constraint to development efforts in different sectors of the Bangladesh economy. Although it is expensive, the government is trying to meet the shortage by installing rental power stations and adopting other quick means of generating electricity. As a result, subsidies for electricity are rising fast.

Figure 2 illustrates the different channels and forms of subsidies for electricity.



Figure 2 » Some Forms of Energy Subsidies



In 2008, direct subsidies of BDT6 billion (US\$73 million) were provided to the power sector to cover losses. Equity is also injected into the power sector through discreet capital projects by the development budget. About 85 per cent of Bangladesh's electricity is generated by natural-gas-fired power stations; the natural gas is supplied to these power plants at heavily discounted prices. Finally, the power sector benefits from government loans at preferential lending rates. The current lending rate to the Bangladesh Power Development Board is 3 per cent for loans in domestic currency and 4 per cent for loans in foreign currency, whereas typical market lending rate is in the 10 to 13 per cent range.

### 1.3.4 Coal

The country's coal resources have great potential for diversifying its energy sources. Extracted coal can be used in coal-based power plants, and is also a source of energy for manufacturing industries.

Bangladesh's total coal reserve is estimated at around 2,797 million tonnes and the heat generation capacity is equivalent to about 37 trillion cubic feet of gas. Moreover, there is ample potential for discovering additional coal mines if extensive exploration initiatives are undertaken all over the country.

The government does not provide subsidies for imported coal. However, there is an implicit subsidy for domestically produced coal if it is used for electricity generation. Currently the BPDB gets coal for power generation at a price that is nearly 40 per cent lower than its market price for other uses.



# 2

## ARE ENERGY SUBSIDIES GOOD FOR BANGLADESH?



## 2. Are Energy Subsidies Good for Bangladesh?

Whether or not energy subsidies benefit Bangladesh is not straightforward, and requires looking at the economic impacts, the parts of society that benefit the most and the environmental effects.

### 2.1 What are the Economic Impacts?

Large fuel subsidies make the country's fiscal position highly vulnerable to changes in global energy prices. When global fuel prices rise steeply, as happened in 2008, the government faces a dilemma: it can either raise domestic fuel prices in line with global prices or increase subsidies to absorb the global price. While the first response can increase inflation in the short-term and is politically difficult to implement, the second distorts the economy and limits development options. Over-consumption of imported fuels resulting from subsidized prices leads to increased demand, which may contribute to deterioration in the country's balance of payments and increase its dependence on imported fuels.

Also, selling imported fuel at lower prices in the domestic market results in large losses for the Bangladesh Petroleum Corporation (BPC), the national oil company that has a monopoly on importing and marketing fossil fuels in Bangladesh. BPC's operating losses are, in turn, covered by loans from state-owned commercial banks, direct budget transfers and net lending by the government.

Table 4 » Operating Losses Incurred by BPC in Recent Years

Year	Amount of loss (in million BDT)
2002–03	76.1
2003–04	9,589.3
2004–05	23,178.8
2005–06	33,377.8
2006–07	26,438.8
2007–08	63,620.8
2008–09	266.23
2009–10	23,075.7

The government's policy of subsidizing domestic fuel prices may have other negative consequences, such as the smuggling of subsidized fuels to neighboring countries where prices are higher and adulteration of expensive fuels with subsidized fuels. Moreover, when subsidies rise quickly, the government may be forced to divert resources from other productive activities or resort to borrowing. Overall, the economy may be exposed to inefficiencies in both allocation and distribution of resources across different sectors and activities.

The concern that reducing fuel subsidies would feed inflation depends partly on the energy product. For example, reducing the subsidy on kerosene is not likely to have much impact on inflation, whereas the same policy for diesel may have larger, short-term impacts on inflation through its effect on transport and other costs.

## 2.2 Who Benefits from Energy Subsidies?

In Bangladesh, the rationale for energy subsidies rests mainly on the argument that they help keep energy affordable, especially for low-income groups, and thereby play an important role in promoting equity and social development.

Energy subsidies contribute to raising household incomes, both directly and indirectly. When households pay less for consuming energy, they have more disposable income to spend on other things. In addition, households benefit indirectly from energy subsidies since they can consume many other goods and services at cheaper prices, as subsidies reduce the energy input costs for these products to the producers, distributors, retailers and service providers. Conversely, if energy prices were to increase as a result of reduced subsidies, the direct impact on real income would be multiplied by indirect impacts throughout the economy as the costs of transportation, irrigation and other goods and services go up.

The benefits of energy subsidies are distributed differently across fuel types. Kerosene is largely used by poor households (both rural and urban) for cooking and lighting. Whereas wealthy urban households consume the largest share of gasoline, the share of consumption of the major sources of energy by four household groups differentiated in terms of income (poor, lower-middle income, upper-middle income and rich) in Bangladesh are illustrated in Table 5. The population-weighted shares of each group are derived from the *Household Income and Expenditure Survey (2010)* and represent household use of purchased energy. Obviously, a larger share is accounted for the industrial, commercial and other uses of energy such as transport and other non-household energy uses. These are not included in the analysis.

**Table 5 » Population-Weighted Share of Household Consumption of Different Fuels by Income Groups (Per Cent)**

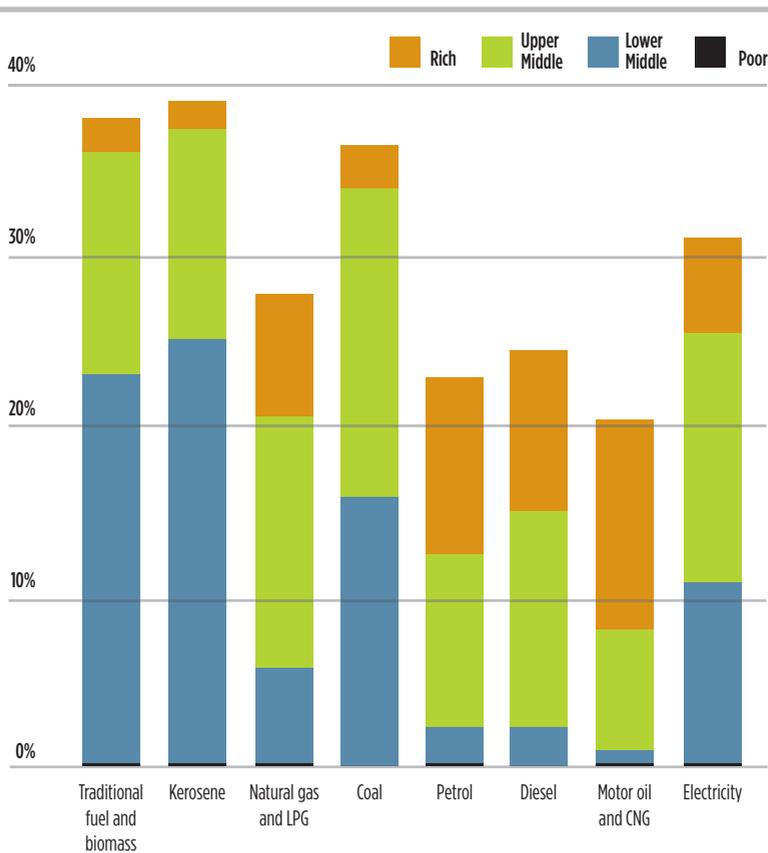
Per capita income group (BDT)	Traditional fuel and biomass	Kerosene	Natural gas and LPG	Coal	Petrol	Diesel	Motor oil and CNG	Electricity
Poor (0–1,499)	0.1	0.1	0.04	0	0.04	0	0.01	0.03
Lower middle (1,500–7,999)	61.4	64.8	21.4	44.4	11.6	11.0	6.1	36.2
Upper middle (8,000–19,999)	33.5	30.7	52.5	48.4	42.8	50.4	34.3	45.7
Rich (20,000 +)	5.0	4.4	26.1	7.2	45.6	38.6	59.6	18.1
Total	100	100	100	100	100	100	100	100

Source: Bangladesh Bureau of Statistics (2010)

The data show that poor households account for only 0.1 per cent of the purchased value of traditional fuel and biomass. Moreover, their population-weighted share of consumption in fossil fuels is extremely low: 0.1 per cent for kerosene and less than 0.1 per cent for natural gas and LPG, petrol, electricity, and motor oil and CNG. At the other extreme, of the total amount of household consumption, the rich and the upper-middle classes consume nearly 79 per cent of natural gas and LPG, 88 per cent of petrol, 89 per cent of diesel, 94 per cent of motor oil and CNG, 56 per cent of coal, and 35 per cent of kerosene. Unlike kerosene and coal, diesel, petrol, natural gas and LPG, motor oil and CNG consumption is mostly prevalent among high- and upper-middle-income groups.

The data also show that the lower-middle-income group consumes a relatively smaller share of household commercial fuel, except kerosene. It appears that households belonging to the rich and upper-middle-income categories consume the largest shares of different fossil fuels and hence receive the lion's share of associated subsidies.

Figure 3 » Share of Different Income Groups in Fuel Consumption



Source: Bangladesh Petroleum Corporation, Energy and Mineral Resource Division (2010)

In short, energy subsidies are largely inequitable and represent a significant reallocation of public funds to higher-income earners. However, because the poor spend a high proportion of their income on energy, they are very vulnerable to increases in the cost of kerosene, LPG, petrol and electricity. Taking that fact into account should be a critical part of any reform strategy.

## 2.3 Do Energy Subsidies Promote Sustainable Energy Development?

Subsidies tend to encourage overconsumption and inefficient use of subsidized energy. Investment decisions may also be altered by changes in relative prices, discouraging energy diversification and creating disincentives for building energy infrastructure.

The Bangladesh government's priority is to develop the country's large natural gas resources, but the lack of domestic funding and constraints in applying cutting-edge technologies have severely hampered progress. Even though international oil companies are involved in exploring and developing offshore gas resources, Bangladesh has failed to attract adequate investments. The situation with independent power producers is similar, and has not led to a sustained expansion of the power sector. The development of coal resources also remains inefficient and lacks funding.

Subsidized prices, in many instances, fail to recover immediate costs, and the pricing system does not allow for fund accumulation to support expansion, development, and recover depreciation costs.

## 2.4 What are the Environmental Impacts of Energy Subsidies?

Bangladesh has one of the lowest per capita rates of carbon dioxide emissions in the world. There are two major reasons for such low emissions. First, the country lacks energy-intensive industries such as steel and aluminum manufacturing. Second, nearly two thirds of the country's commercial primary energy comes from natural gas. However, urban air pollution is one of the most significant environmental issues related to the energy sector in Bangladesh. Old and badly maintained vehicles are the major sources of particulates; and the problem gets further complicated by the particulate load of brickfields using biomass fuel around major cities. It may be argued that subsidized fuels lead to inefficient fuel consumption in the transport sector resulting in increased air pollution, especially in the cities. Subsidies may well act as a disincentive to adopting energy-efficiency measures or alternatives such as LED (light-emitting diode) lights and solar lanterns.

The population of Bangladesh still relies heavily on traditional fuels, with an overwhelming number of rural households using biomass for cooking. Only the relatively better off households use kerosene and LPG. The over-exploitation of biomass has caused large-scale deforestation and widespread use of crop residues as fuel and fodder. The collection of cow dung has significantly reduced the soil fertility and its organic content matter. Fuel subsidy reform could lead to an increase in biomass consumption. This should be an important consideration for government when designing reform policies and accompanying support measures for low-income groups.

## 2.5 Do Energy Subsidies Promote Social Equity and Justice?

In Bangladesh, one of the important aspects of social equity and justice is affordable access to fuel and electricity for all. In particular, providing electricity access to the majority of the rural population has always been high on the government's agenda. The government's policy is to bring all villages under the electricity network by the year 2020. However, achieving this goal depends on tackling rural poverty more effectively, as poor households have very little incentive to access electricity when suffering from severe deprivations.

The total dependable generation capacity is low relative to the demand for electricity in the country. As rural households are the "lowest priority" consumers, they often have to endure power cuts during peak hours. The poor quality of supply also affects irrigation. Improving the quality of life of rural households and the social sustainability of energy-sector interventions would thus depend on improving both the quantity and quality of energy services available to consumers.

**Fuel subsidy reform could lead to an increase in biomass consumption. This should be an important consideration for government when designing reform policies and accompanying support measures for low-income groups.**

# 2

## SECTION TWO | ARE ENERGY SUBSIDIES GOOD FOR BANGLADESH?

In view of the government's severe resource constraints, several issues need to be effectively resolved to arrive at a national consensus regarding subsidy policies. These include, for instance: Are energy subsidies a good use of the government's limited fiscal resources vis-à-vis its development priorities? Would fuel subsidies be better spent if allocated to expanding the rural electricity network, investing in power generation and distribution, and improving service delivery? It is obvious that these and related issues need to be seen within a broader macro framework, keeping both short- and medium-term options in view. The priority, however, should be to address the subsidy issue comprehensively, as it is a major expenditure of public resources in the country.

Outright removal of subsidies may, however, bring short-term negative impacts on some groups, especially those that consume the most energy. These groups may have to adjust their consumption bundles in order to meet higher fuel costs. Since poorer groups spend a larger share of their budget on food and other agricultural products, they are likely to lose less, as these prices are less sensitive to fuel price changes. However, the urban poor are likely to be more vulnerable to fuel price hikes.

In the longer term, the adverse consequences of subsidy reduction on the poor could be offset by the economy-wide benefits, such as better fiscal sustainability, increased social spending targeting the poor, more efficient resource allocation, increased investment and higher growth.

**Since the poorer groups spend a larger share of their budget on food and other agricultural products, they are likely to lose less, as these prices are less sensitive to fuel price changes. However, the urban poor are likely to be more vulnerable to fuel price hikes.**

## 2.6 What Are the Government of Bangladesh's Plans for Reforming Energy Subsidies?

The government has repeatedly expressed its strong desire to rationalize fuel prices and reduce subsidies, in order to promote an efficient and sustainable development process. The implementation of the policy, however, has not been smooth. Although price adjustments to energy products in Bangladesh are done by the Bangladesh Energy Regulatory Commission, a statutory body, it does so mostly on an ad hoc basis.

### Box 1 » Upsurge in Subsidies in FY 2012

In the FY 2012 budget, total subsidies are estimated at BDT205 billion (US\$2.5 billion) which is nearly 13 per cent of the revenue budget and 2.3 per cent of GDP. However, due to increasing demand and a price increase in subsidized products, the total subsidy could rise to BDT474 billion (US\$5.8 billion) (nearly 30 per cent of the revenue budget and 5.0 per cent of GDP) if no price adjustments are made to the subsidized products. Out of that amount, nearly 60 per cent would be required for fuel subsidies, another 11 per cent for electricity subsidies, 14 per cent for fertilizer and agriculture subsidies, and the rest for food and other areas.

Source: Bangladesh Budget FY 2012, Ministry of Finance

In order to reduce subsidies, fuel prices were adjusted four times in 2011 and 2012 (Table 7). In May 2011, prices of all petroleum products were raised by BDT2 per liter (US\$0.02). The next round of price hikes took place in September 2011, followed by adjustments in December 2011 and January 2012. The price of CNG was also raised by BDT5 per cubic metre (US\$0.06) in November 2011.

Table 6 » Fuel Price Adjustments in 2011 (BDT Per Litre)

	May 2011	September 2011	December 2011	January 2012
Diesel	46	51	56	61
Petrol	76	80	86	91
Octane	79	84	89	94
Kerosene	46	51	56	61
Furnace oil	42	50	55	60

Source: Ministry of Energy and Mineral Resources, Government of Bangladesh

Despite recent increases in prices, the total volume of fuel subsidy is expected to rise, mainly due to the import of additional petroleum products for quick rental and peaking power plants. The government will have to import about 7 million tonnes of petroleum in FY 2012, compared to 5.4 million tonnes in FY 2011 and 2.6 million tonnes in FY 2010.

However, the government has plans to liberalize fuel prices, as part of an April 2012 agreement with the International Monetary Fund for a loan under its Extended Credit Facility. Bangladesh has agreed to a comprehensive reform program covering various aspects of the policy framework, including subsidy reforms. The reform program stipulates that an automatic adjustment formula for fuel prices will be adopted by December 2012 that will ensure full pass-through of changes in international prices.

# 3

## WHAT DO WE KNOW ABOUT REFORM OF ENERGY SUBSIDIES?



### 3. What Do We Know About Reform of Energy Subsidies?

A wide set of policies have been used by countries around the world to ease the transition away from fuel subsidies. The policies can be grouped into two categories: those that provide assistance to poor households and those that help the broader community to understand and support reform. The best chance for successful reform (which can be defined as the long-term elimination of subsidies with minimal negative impacts) requires a comprehensive strategy drawing on a range of transitional support policies (Laan, Beaton & Presta, 2010). Research into the nature of the subsidy, how its costs and benefits are distributed and identification of those most likely to be affected by its removal will help design the reform strategy.

#### 3.1 Policies to Support Poor Households

Reducing energy subsidies would free up government funds for other purposes. By allocating these funds to programs that directly target the poor, the government would redirect money from fuel subsidies (that mostly benefit the rich) to those most in need. There are two main ways that governments can do this: cash transfers or increased social spending.

Lessons for both of these approaches can be drawn from Indonesia's experience. In 2005 and 2008, the Indonesian government used the Cash Transfer Assistance Program (Bantuan Langsung Tunai [BLT]) to reduce opposition to fuel price increases and help poor families cope with higher energy costs. The program provided two payments of IDR300,000 (around US\$30) directly to poor families (Widjaja, 2009). The BLT was accompanied by short-term measures referred to as the Fuel Subsidy Reduction Compensation Program (Program Kompensasi Pengurangan Subsidi Bahan Bakar Minyak). These programs provided targeted support for affected groups by increasing social spending in the areas of education, health and rural infrastructure (Beaton & Lontoh, 2010).

In a review of these policies, Beaton and Lontoh (2010) considered them reasonably successful in assisting poor households and reducing opposition to fuel price increases. According to various reviews of the 2005 BLT Program, mistargeting is thought to have been relatively low and the majority of households did actually receive the funds they had been promised (Hastuti et al., 2006).

However, there were problems. Some cash transfers were misappropriated and some deserving recipients did not receive payments, which resulted in social unrest (Cameron & Shah, 2011). Those missing out on payments vented their frustration on the local administrators of the scheme, leading to violence in some cases. Any future implementation of the BLT would need to take into account lessons learned from previous experience, such as the need for better targeting, stronger oversight and greater support for village officials.

An alternative approach would be to link cash payments to behaviours that assist community development. For example, conditional cash transfers require recipient families to commit to certain activities, generally related to children's health care and education. Mexico's Oportunidades program is one such scheme. It started with approximately 300,000 beneficiary households in 1997; by 2009, it covered 5 million households (Fiszbein & Schad, 2009). Significant data collected over the years indicate that the program has been successful in assisting the poor. Mexico's program was not coupled with reductions to fossil-fuel subsidies, but it nonetheless provides an example of a social safety net that could be used to compensate for fuel price increases while maximizing development outcomes.

Alternative avenues for social spending (funded by subsidy elimination) can also be observed in other countries. Jordan, for example, supported subsidy reform in 2008 by increasing the minimum wage and providing a salary increase to low-paid government employees. A one-time bonus was given to low-income government employees and pensioners and electricity tariffs were maintained at low levels. In the same year, Thailand initiated a six-point, six-month THB46 billion (US\$1.3 billion) program to help the poor in response to high international oil prices. The plan offered free electricity to those consuming less than 80 kilowatt-hours a month (and half the cost for households consuming less than 150 kilowatt-hours), free rides on the 800 ordinary buses operated by the state-run Bangkok Mass Transit Authority and on third-class trains, free water for the first 50 cubic metres, excise exemption on ethanol-gasoline blends and diesel, and a ceiling on LPG prices (Kojima, 2009).

The best options for transitional support measures will be country specific, depending on the administrative capacity of the country and coverage of services. Targeted cash transfers require that the poor can be identified and a cash delivery mechanism established. A prerequisite to providing cheap access to electricity is comprehensive electricity coverage. Where such infrastructure does not exist, governments can increase social spending through publicly funded health clinics, schools, roads, public transport, and water and sanitation infrastructure.

## 3.2 Good Processes to Support Reform

The way in which subsidies are eliminated can also ease the transition to market prices and build public support for reform. Good practice includes a clear communications campaign, stakeholder consultation, transparency about fuel prices, a gradual phase-out of subsidies and monitoring of the impacts of implementation, with adjustments if necessary.

### 3.2.1 Communication

Information campaigns are an important element of any successful subsidy reform strategy. For example, in 2005, the Indonesian government implemented a public relations campaign alongside cash transfers and social spending as a means for building support for reform. In contrast with previous attempts to increase fuel prices, the 2005 reforms met with no substantial opposition (Beaton & Lontoh, 2010).

Public understanding and acceptance of changing fuel prices can be encouraged by regularly publishing information, such as price surveys, comparisons of domestic and international prices, historical and current prices, and the composition of each key petroleum product (such as import prices, refining and distribution costs and taxes) (World Bank, 2009). In addition, governments should encourage competition in the retail sector by requiring filling stations to post prices on display boards.

Chile, for example, has strong transparency arrangements for its fuel subsidies and pricing policies. The National Energy Commission determines fuel price structure, monitors prices set by the National Petroleum Company and provides weekly media briefings about pricing. While Chile still has some fuel subsidies, transparency has helped the public to understand price fluctuations and paved the way for liberalization of the domestic fuels market.

Clear communication with stakeholders and the public appears to be a key element of an effective reform strategy. If stakeholders participate in the decision-making process from the beginning, opposition to subsidy reform can be addressed early and taken into account in designing policies to ease the transition. Public awareness campaigns help citizens to understand why reform is necessary and how their money can be redirected to other services, or returned to them in the form of lower taxes.

### 3.2.2 Gradual Phase-Out

A gradual phase-out of subsidies can give recipients time to adjust. The longer a subsidy has been in place, the more difficult it will be to remove and the longer the likely time frame required for reform. Subsidies have a tendency to become perceived as entitlements and any attempt to reduce them can be politically hazardous (Steenblik, 2007). In December 2010, the Bolivian government made sudden and dramatic increases to the prices of subsidized fuel, raising them by over 80 per cent, with few supporting measures to ease the transition. The result was a major public backlash and a rapid reinstatement of subsidies by the government. The German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit (GIZ)) recommends that governments avoid price jumps of over 10 per cent per adjustment when instituting reform; instead, the GIZ recommends governments implement small increments on a regular (e.g., monthly) basis, over a clear time frame (GIZ, 2011).

However there can be opportune moments to deregulate quickly. Falling oil prices in the second half of 2008 provided an opportunity for several governments to undertake price-subsidy reforms, including China, Ethiopia and Vietnam (Kojima, 2009).

### 3.2.3 Monitoring and Adjustment

Monitoring and adjusting reform on an ongoing basis are necessary to assess whether measures have been effective, check whether there have been unintended negative consequences and adapt policies over time (Laan, Beaton & Presta, 2010). Temporary assistance policies also require careful monitoring in order to ensure that the assistance is reaching the target groups and that support does not continue for so long that it becomes entrenched.

Finally, strong governance practices must be put in place to prevent the government from becoming enmeshed in fuel pricing again in the future. Governments will always be called upon by the public to intervene when fuel prices are high. Market-based pricing overseen by independent bodies that regulate competition and transparency regarding fuel prices allow governments to demonstrate to citizens that fuel prices are dictated by international forces, not the government.

### 3.3 Conclusion

While there is a clear need to support energy access for the poor in Bangladesh, current fuel and electricity subsidies are an expensive and ineffective means for doing so. The government is spending more than 4 per cent of GDP on energy subsidies—more than it spends on health and social welfare programs.

Proper pricing of primary fuel and energy is important to conserve energy and to attract domestic and foreign private investments in the energy sector. Since the cost of electricity production is expected to rise in the near future due to the installation of high-cost, liquid-fuel-based plants, it is prudent for the Bangladesh Energy Regulatory Commission to gradually raise power tariffs. Similarly, the prices of other fossil fuels should follow actual costs of imports in order to keep subsidies within acceptable fiscal limits.

Although the poorest households do not receive the biggest benefits from energy subsidies, they will be disproportionately affected by rising energy costs. When reforming subsidies, the government should pay special attention to measures that reduce the negative impacts for the poor, improve energy access and provide support through targeted social assistance programs.

Several issues act as strong impediments to implementing reforms, including the absence of strong political will, capacity to tackle vested interest groups and the administrative tools to provide targeted support programs for poor or vulnerable groups. Improving transparency in reporting the full amount of fuel subsidies (both direct and indirect) in relevant government accounts and raising public awareness about the true cost of subsidies and the options for reform, including how the government plans to reinvest that money back into the economy, will help to overcome these barriers.

## 4. Abbreviations

BLT	Bantuan Langsung Tunai	GDP	Gross domestic product
BPC	Bangladesh Petroleum Corporation	GIZ	German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit)
BPDB	Bangladesh Power Development Board	LPG	Liquefied petroleum gas
CNG	Compressed natural gas	TWH	Terawatt Hours
FY	Fiscal Year		

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Currency conversion: US\$1 = BDT82

## 5. References

Asaduzzaman M. & Mansur, M. (2011). Power and energy development and management in Bangladesh: A benchmark and future policies. In M. K. Mujeri & S. Alam (Eds.), *Background papers: Sixth Five Year Plan of Bangladesh (2011–2015)*, Vol. 2. Dhaka: Bangladesh Institute of Development Studies and Bangladesh Planning Commission.

Asian Development Bank. (2011). *Assessment and implications of rationalizing and phasing out fossil-fuel subsidies*. ADB Technical Assistance Report. Manila: Asian Development Bank.

Bangladesh Bureau of Statistics. (2010). *Household income and expenditure survey*. Retrieved from: <http://www.bbs.gov.bd/PageReportLists.aspx?PARENTKEY=66>

Beaton, C. & L. Lontoh. (2010). *Lessons Learned from Indonesia's attempts to reform fossil-fuel subsidies*. Geneva: Global Subsidies Initiative of the International Institute for Sustainable Development.

Cameron, L. & Shah, M. (2011). *Mistargeting of cash transfers, social capital destruction, and crime in Indonesia*. Melbourne: Monash University. Retrieved from: [http://users.monash.edu.au/~clisa/papers/BLT\\_JPubE.pdf](http://users.monash.edu.au/~clisa/papers/BLT_JPubE.pdf)

Gesellschaft für Internationale Zusammenarbeit. (2011). *Fuel price reform in Bolivia*. Retrieved from <http://www.gtz.de/de/dokumente/giz2011-fuel-price-reform-bolivia-december-2010.pdf>

Ellis, J. (2010). *The effects of fossil fuel subsidy reform: A review of modelling and empirical studies*. Geneva: Global Subsidies Initiative of the International Institute for Sustainable Development.

Fiszbein, A. & Schad, N. (2009). *Conditional cash transfers: Reducing present and future poverty*. Policy Research Report. Washington, D.C.: World Bank.

Hastuti, Toyamah, N., Usman, S., Sulaksono, B., Budiyati, S., Widyanti, W. D. et al. (2006). *A rapid appraisal of the implementation of the 2005 Direct Cash Transfer Program in Indonesia: A case study in five Kabupaten/Kota*. SMERU Research Institute. Retrieved from: [http://www.smeru.or.id/report/research/blt/slt\\_eng.pdf](http://www.smeru.or.id/report/research/blt/slt_eng.pdf)

International Energy Agency, Organisation for Economic Co-operation and Development, and World Bank. (2010). *The scope for fossil fuel subsidies in 2009 and a roadmap for phasing out fossil fuel subsidies*. Joint Report. Washington D.C.: IEA-OECD-World Bank.

Kojima, M. (2009). *Government response to oil price volatility*. Washington D.C.: World Bank.

Ministry of Finance, Government of People's Republic of Bangladesh (2011). *Power and energy sector roadmap: An update*. Dhaka: Finance Division.

Steenblik, R. (2007). *A subsidy primer*. Geneva: Global Subsidies Initiative of the International Institute for Sustainable Development.

World Bank. (2010a). *Bangladesh public expenditure and institutional review: Towards a better quality public expenditure*. (Vol. 2). Washington D.C.: World Bank.

World Bank. (2010b). *Subsidies in the energy sector: An overview*. Background Paper for the World Bank Group Energy Sector Strategy. Washington, D.C.: World Bank.

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## The International Institute for Sustainable Development's Global Subsidies Initiative

The International Institute for Sustainable Development (IISD) launched the Global Subsidies Initiative (GSI) in December 2005 to put a spotlight on subsidies – transfers of public money to private interests – and how they undermine efforts to put the world economy on a path toward sustainable development.

Subsidies are powerful instruments. They can play a legitimate role in securing public goods that would otherwise remain beyond reach. But they can also be easily subverted. The interests of lobbyists and the electoral ambitions of officeholders can hijack public policy. Therefore, the GSI starts from the premise that full transparency and public accountability for the stated aims of public expenditure must be the cornerstones of any subsidy program.

But the case for scrutiny goes further. Even when subsidies are legitimate instruments of public policy, their efficacy – their fitness for purpose – must still be demonstrated. All too often, the unintended and unforeseen consequences of poorly designed subsidies overwhelm the benefits claimed for these programs. Meanwhile, the citizens who foot the bills remain in the dark.

When subsidies are the principal cause of the perpetuation of a fundamentally unfair trading system, and lie at the root of serious environmental degradation, the questions have to be asked: Is this how taxpayers want their money spent? And should they, through their taxes, support such counterproductive outcomes? Eliminating harmful subsidies would free up scarce funds to support more worthy causes. The GSI's challenge to those who advocate creating or maintaining particular subsidies is that they should be able to demonstrate that the subsidies are environmentally, socially and economically sustainable – and that they do not undermine the development chances of some of the poorest producers in the world.

To encourage this, the GSI, in cooperation with a growing international network of research and media partners, seeks to lay bare just what good or harm public subsidies are doing; to encourage public debate and awareness of the options that are available; and to help provide policy-makers with the tools they need to secure sustainable outcomes for our societies and our planet.

[www.globalsubsidies.org](http://www.globalsubsidies.org)

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For further information contact Ms. Kerry Lang at: [klang@iisd.org](mailto:klang@iisd.org) or [info@globalsubsidies.org](mailto:info@globalsubsidies.org) or +41.22.917.8920

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E-17 Agargaon, Sher-e- Bangla Nagar,  
GPO Box # 3854, Dhaka-1207, Bangladesh

Telephone 880-02-8110759, 9143441-8 | Fax 880-2-8113023 | [www.bids.org.bd](http://www.bids.org.bd)



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