

# A CITIZENS' GUIDE TO ENERGY SUBSIDIES IN NIGERIA



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## Introduction

Available and affordable energy is critical to the provision of fundamental and often life-sustaining goods and services, such as heating, lighting, cooking and transport. Energy is also necessary for more complex goods and services, from the refrigeration of vaccines and food to the supply of reliable electricity for manufacturing. Improving energy access is therefore an important strategy for promoting economic development. This thinking usually forms the basis of any decision to subsidize energy.

Nigeria has subsidized energy for a long time but the sustainability of these subsidy schemes is now the focus of controversy. Over the past few years, corruption and fluctuations in international oil prices have made subsidization a pressing issue. The government has committed to reforming energy subsidies due to their spiralling cost, but attempts to raise prices have been hotly contested by the Nigerian people, who see cheap energy as their share of wealth from the country's oil reserves. Many citizens are also unconvinced by government promises to redirect spending to other public goods and services.

Citizens have a vital stake in this debate, but, as in many countries, there is all too often little solid information on the exact costs and benefits of subsidies. This problem is especially pressing in Nigeria, where even basic transparency about the exact scale of spending is hard to find. How can busy citizens, making their living and raising families, hope to keep track of what is going on? In large part, the task must fall to civil society groups and journalists, the intended audience of this guide.

The following pages gather the best available information on the costs and benefits of energy subsidies. The first part of this guide provides an overview of energy use in Nigeria and the second part explains how various types of energy are subsidized. The third part looks at who benefits from subsidies and how. The fourth part identifies the winners and losers from reform, as well as summarizing Nigeria's most recent reform efforts. The fifth and final part summarizes lessons learned from other countries.

1

**A SNAPSHOT OF  
ENERGY PRODUCTION  
AND CONSUMPTION  
IN NIGERIA**



## 1. A Snapshot of Energy Production and Consumption in Nigeria

In order to understand energy subsidies in Nigeria, it is useful to have a sense of the country's energy resources and needs. What energy is produced? What energy is consumed?

### 1.1 Production

Nigeria is the world's twelfth biggest producer of crude oil, having produced 2.5 million barrels of sweet, light petroleum crude per day in 2011 (BP, 2012). It does not have the capacity to refine most of its crude; indeed, it exported over 98 per cent of its production in 2009 (International Energy Agency [IEA], 2010).

Nigeria also produces natural gas, around 69 per cent of which was exported in 2009. The remaining gas was consumed domestically, mostly by industry, and used to produce electricity. The rest of Nigeria's electricity supply derives from oil products and hydropower resources (IEA, 2010).

The country also produces fuel from biomass and waste, such as fuel wood, charcoal and dung. This is a significant energy source for the country, with an energy value equal to just under 92 million tonnes of oil (IEA, 2010).

### 1.2 Consumption

When it comes to energy consumption, oil products are an important source of energy in Nigeria: transport requires gasoline and diesel and, at the household level, kerosene is a common fuel for cooking, heating and lighting, though some households also use gas or coal (Desalu, Ojo, Ariyibi, Kolawole & Ogunleye, 2012). Many businesses rely on oil products as an input to production or for electricity generation. Oil products are less important for industry, representing only 2 per cent of industrial energy consumption in 2009 (IEA, 2010). Since Nigeria cannot refine the majority of its crude oil, most oil products are imported from abroad.

Among other fossil fuels, natural gas is significant to industries, representing 9 per cent of consumption (IEA, 2010). Coal is not a very important fuel in the country, with consumption having fallen dramatically since the 1980s (Index Mundi, 2010).

Access to electricity in Nigeria was last estimated at around 50 per cent for the country as a whole. Access in urban areas is much higher than the national average at 84 per cent, whereas in rural areas it extends to only 35 per cent of the population (Foster & Pushak, 2011). The sector struggles with serious issues of electricity reliability: power outages are reportedly taking place more than 320 days a year. As a result, 60 per cent of Nigerian firms are estimated to have their own backup generators (Foster & Pushak, 2011). These generators run on diesel and, in the case of small generator sets, gasoline. This increases the reliance of businesses on oil products and, in turn, increases the cost of electricity (Bazilian & Onyeji, 2012)

The traditional biomass fuel that Nigeria produces is a key source of energy for domestic consumption. According to the IEA, over 97 per cent of household energy consumption was sourced from biomass and waste in 2009. The agency estimates that this represented a significant energy source for Nigerian industries too, making up 86 per cent of total industrial energy consumption (IEA, 2010).



2

**AN OVERVIEW OF NIGERIA'S  
ENERGY SUBSIDIES**



## 2. An Overview of Nigeria's Energy Subsidies

### 2.1 What is an Energy Subsidy?

Commonly, energy subsidies are 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” (IEA, Organization of the Petroleum Exporting Countries [OPEC], Organisation of Economic Co-operation and Development [OECD] & World Bank, 2010). Energy subsidies come in two main categories: those designed to reduce the cost of consuming energy, called *consumer subsidies*, and those aimed at supporting domestic production, called *producer subsidies* (Burniaux et al., 2009, as cited in Ellis, 2010).

Within these categories, energy subsidies come in different forms. The United Nations Environment Programme (UNEP), OECD and the IEA identify the following typical mechanisms by which governments support the production and consumption of energy (UNEP & OECD/IEA, 2002; UNEP, 2008):

- Direct financial transfers: grants to consumers, grants to producers, low-interest or preferential loans and government loan guarantees.
- Preferential tax treatment: tax credits; tax rebates; exemptions on royalties, duties or tariffs; reduced tax rates; deferred tax liabilities; and accelerated depreciation on energy-supply equipment.
- Trade restrictions: tariffs, tariff-rate import quotas and non-tariff trade barriers.
- Energy-related services provided directly by government at less than full cost: government-provided energy infrastructure, public research and development.
- Regulation of the energy sector: demand guarantees, mandated deployment rates, price controls, environmental regulations and market-access restrictions.

## 2.2 Why Subsidize Energy?

Policy-makers often justify energy subsidies with the argument that they contribute to economic growth, poverty reduction and security of supply (IEA, OPEC, OECD & World Bank, 2010). However, subsidies are rarely the most efficient tool at promoting these objectives. In reality, the main motivation behind energy subsidies is often political. Subsidies are a very tangible way for governments to show that they are supporting their people. This is particularly important in countries that lack the administrative capacity to offer social and economic support through other policy mechanisms (Victor, 2009).

## 2.3 Consumer Energy Subsidies in Nigeria

In Nigeria, consumer subsidies exist for three energy products: gasoline (Premium Motor Spirit [PMS]), household kerosene (HHK) and electricity.

In the case of petroleum products, the government requires marketers to sell fuel at below market rates. It then pays the difference to petroleum products marketers and licensed importers of fuel.

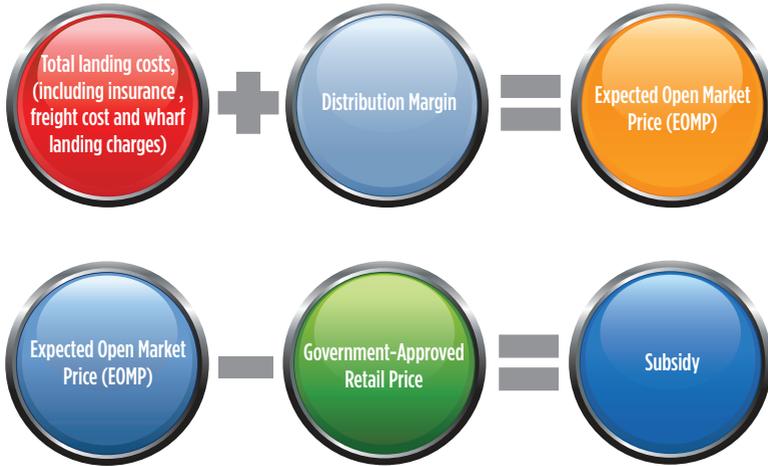
Electricity subsidies are conferred by charging tariffs that are too low to cover the cost of electricity production. In part, state utility companies are reimbursed for this as part of the lump sum they are paid to cover all their activities. In part, the subsidy is conferred by under-charging the electricity sector for the cost of natural gas.

The following sections explain in detail how these subsidy regimes operate.

### 2.3.1 PMS Gasoline

The Nigerian government subsidizes gasoline by paying marketers the difference between the market price—called the Expected Open Market Price' (EOMP)—and the government-approved retail price for PMS gasoline (see Figure 1).

Figure 1 » Components of PMS Pricing and Subsidy per Litre

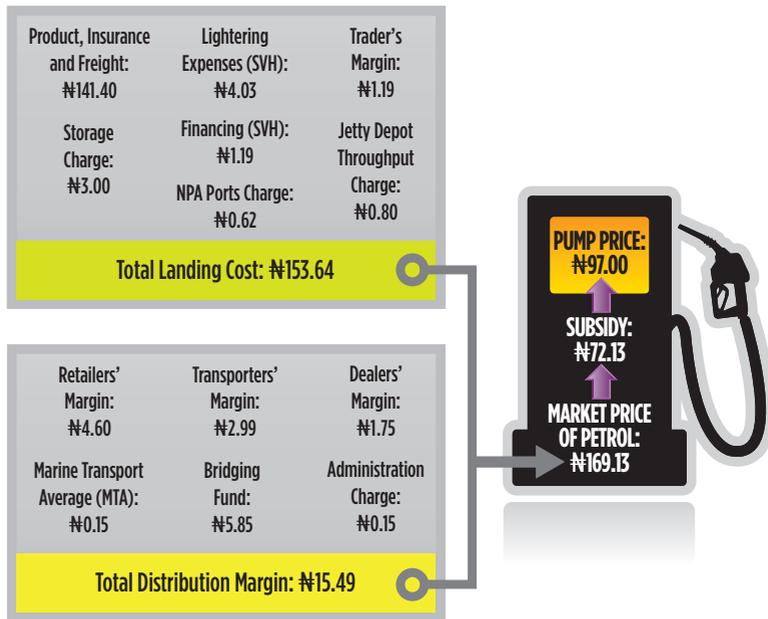


Source: Developed from the Petroleum Products Pricing Regulatory Agency (PPPRA) Pricing Template for PMS (2012a).

The EOMP is calculated as the sum of landing costs (all costs incurred up until product purchase, including production in foreign refineries, shipping and port charges), the cost of distribution in Nigeria and the various actors' profit margins, plus taxes (see Figure 2). However, since taxes on PMS are not charged by the government, the current EOMP prices do not capture any tax component.

The government-approved retail price is set by the presidency and there are no clear indices that determine such prices. Prices are not changed at fixed periods but are determined at different times by the presidency. Price increases are usually stiffly opposed by labour unions and citizens, often leading to compromises and lower price increases.

Figure 2 » Components of the PMS Price per Litre



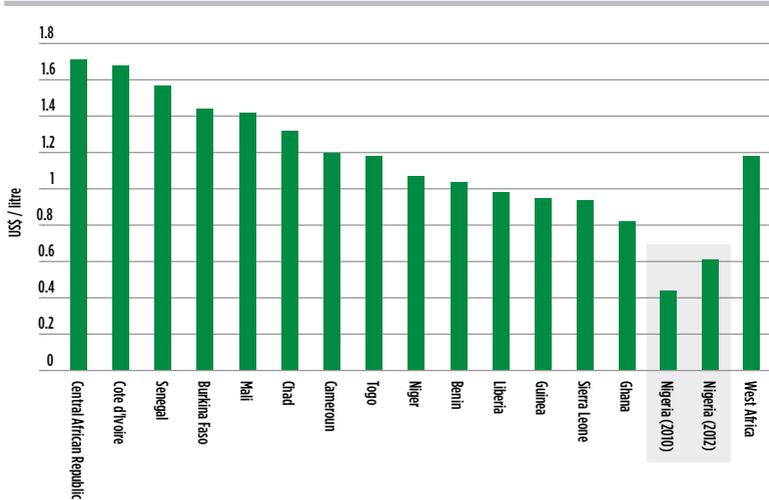
Source: CPPA; adapted from PPPRA (2012a). Figures are accurate as per the most recent pricing template available from the PPPRA website (April 2012).

The price difference between the EOMP and government-approved retail price does not remain constant: the EOMP follows fluctuations in international oil market prices, while the government price does not change. When world oil prices go up, so does the cost of the subsidy. Local foreign exchange rates also impact the final pump price.

According to the most recent template published by the Petroleum Products Pricing Regulatory Agency (PPPRA), the EOMP for PMS was ₦169.13 (US\$1.05)<sup>1</sup> per litre in April 2012 while the approved retail price was ₦97.00 (US\$0.60) per litre (PPPRA, 2012a). This means that the government paid ₦72.13 (US\$0.45) per litre of PMS as a subsidy. Subsidy payments per litre in 2012 fluctuated to ₦51.41 (US\$0.32), ₦59.87 (US\$0.37) and ₦71.91 (US\$0.45) in January, February and March respectively. These fluctuations were the result of changes in the international market price of oil and naira exchange rate to the dollar.

The subsidy makes the cost of gasoline in Nigeria lower than any neighbouring country and the lowest in West Africa (see Figure 3).

Figure 3 » Gasoline Prices in Neighbouring Countries and the West African Subregion



Source: Except 2012 Nigerian fuel price, all data as of November 2010 and taken from Wagner, Becker, Dicke, Ebert & Ragab (2012).

<sup>1</sup>Unless otherwise stated, or deriving from original sources, all currency exchanges are based on the following annual average for 2011: ₦1 = US\$0.0062.

The total cost of the PMS subsidy is calculated by taking the subsidy per litre and multiplying it by the amount of PMS that is imported every year. PPPRA estimates of the volume of PMS imported and subsidy expenditure are summarized in Table 1, below. It has been alleged that figures on the volumes of fuel imported have been significantly inflated and that much of the associated expenditure is in fact being captured by corruption (see below and Corruption: Fuel Subsidy Regime on pages 32–33).

**Table 1 » PPPRA-Reported Figures on PMS Imports and Subsidy Cost in Nigeria, 2006–2011**

Year	PPPRA data on PMS imports (litres)	Subsidy cost (₦)	Average subsidy (₦ per litre)	Average EOMP (₦ per litre)	Average crude price (OPEC, ₦/litre)
2006	9.3 billion	151.9 billion	16.3	74.94	49.29
2007	10.2 billion	188 billion	18.4	88.44	54.69
2008*	11.3 billion	*256.3 billion	*22.7	98.57	70.63
2009	14.4 billion	421.5 billion	29.3	91.39	57.11
2010	15.7 billion	673 billion	42.7	111.67	73.07
2011	21.9 billion	**1,300 billion	59.3	145.80	104.75

\* 2008: Figures only show PMS payments from January 2008–July 2008. Other records from PPPRA have only lumped PMS and HHK 2008 subsidy payments together, making it difficult to determine the actual amounts paid separately for each of the two products. The sum of PMS and HHK payments in 2008 is ₦630.5 billion (US\$3.9 billion).

\*\* This figure has been revised up to ₦2.19 trillion (US\$13.6 billion) by the Ministry of Finance after arrears were paid in 2012 for consumption in 2011.

Sources: PPPRA (2008a); PPPRA (2012d); OPEC (2012a); OPEC (2012b).

The cost of the PMS subsidy is often much higher than anticipated by the government. In 2011 the Appropriation Bill only made a provision of ₦245 billion (US\$1.5 billion) for PMS subsidy, but the actual amount spent totalled about ₦1.348 trillion (US\$8.4 billion) as of December 2011. The Minister of Finance has claimed that this figure should actually be about ₦2.19 trillion (US\$13.6 billion), when arrears of ₦457 billion (US\$2.8 billion) paid this year are incorporated (Akinbajo, 2012).

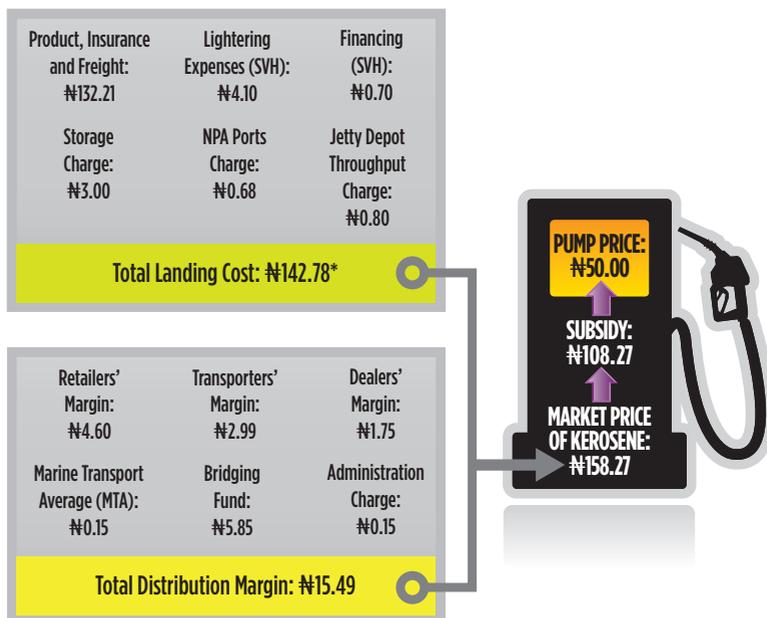
The approved budget for PMS subsidies in 2012 was ₦888.1 billion (US\$5.5 billion) (Federal Ministry of Finance, 2012). Given arrears due for 2011, this leaves only ₦431.1 billion (US\$2.7 billion) to cover subsidy expenses in 2012. The governor of the Central Bank of Nigeria has predicted that these funds will be exhausted well before the end of the year (Brock, 2012).

The high cost of subsidies is due in part to corruption. A probe into the administration of subsidy payments has recently disputed the scale of funds used to pay for subsidies and the figures summarized above are now under review. The probe was commissioned by the House of Representatives and conducted by the House Ad Hoc Committee to Verify Subsidy Claims, led by the Hon. Farouk Lawan. It alleges that the administration of the subsidy regime is mired in corruption, with astronomically inflated subsidy claims. Among the issues the report raised are inflated consumption figures and landing costs, and lack of due process in prequalification, allocation, verification, certification and payment for supplies. For instance, it claims that the daily “consumption of PMS by Nigerians is 31 million litres while that of kerosene is 10 million” (House of Representatives, 2012), contrary to official figures that imply a daily consumption of 60 million litres and 9 million litres respectively.

### 2.3.2 HHK

Similar to PMS, HHK is subsidized by the government through a reimbursement made to marketers for the price differential between the EOMP and the government-regulated retail price (see Figure 4 for a summary of the components of the EOMP for kerosene in April 2012).

Figure 4 » Components of the HHK Price per Litre



Source: CPPA, adapted from PPPRA (2012b). Figures are accurate as per the most recent pricing template available from the PPPRA website (August 2012).

\*In the pricing template published by the PPPRA, the total sum of the reported components of the HHK landing cost do not equal the total reported HHK landing cost, with a discrepancy of ₦1.29. No explanation is given for this discrepancy.

According to the PPPRA, the EOMP for HHK was ₦158.27 (US\$0.98) per litre in August 2012, while the approved retail price was ₦50.00 (US\$0.31) per litre, translating to a government subsidy of ₦108.27 (US\$0.67) per litre (PPPRA, 2012b). Subsidy payments per litre in 2012 have fluctuated from ₦113.13 (US\$0.70), to ₦118.69 (US\$ 0.73) to ₦122.35 (US\$ 0.76) in January, February and March respectively (PPPRA, 2012c) and ₦119.43 (US\$0.74), ₦109.67 (US\$0.68), ₦94.75 (US\$0.59), ₦101.79 (US\$0.63) and ₦108.27 (US\$0.67) in that order from April to August 2012 (PPPRA, 2012b). This, the PPPRA says, reflects fluctuations in the international oil market price (PPPRA, 2012c).

The total cost of the HHK subsidy has fluctuated over the past years. PPPRA estimates of the volume of HHK imported and the associated fuel subsidy expenditure are summarized in Table 2. As with PMS subsidies, it has been alleged that import figures have been significantly inflated and the associated expenditure captured by corruption. There is also controversy over the exact status of the payments from August 2009 to December 2011. In 2009 a directive from the president ordered the Nigeria National Petroleum Corporation (NNPC) to discontinue HHK subsidies that were not reaching the intended beneficiaries. The NNPC discontinued its claim for funds to pay for the subsidy until February 2011, when it claimed arrears for kerosene subsidies during the period the policy had been suspended. The House committee probe into subsidy payments has ordered that NNPC refund the sum of ₦310 billion (US\$1.9 billion) it claimed. It also recommended that the previous directive be withdrawn and the subsidy restored (House of Representatives, 2012). As of the time of writing this guide, subsidy payments remained on HHK as a difference between the open market price and the government fixed price of ₦50 per litre.

**Table 2 » PPPRA-Reported Figures on HHK Imports and Subsidy Cost in Nigeria, 2006–2011**

Year	PPPRA figures on HHK imports (litres)	Subsidy cost (₦)	Average subsidy (₦ per litre)	Average crude price (OPEC, ₦/litre)
2006	2.4 billion	89 billion	37.1	49.29
2007	2 billion	90.8 billion	45.4	54.69
2008	2.5 billion	90.4 billion*	–	70.63
2009	1.9 billion**	–	–	57.11
2010	0.74 billion**	–	–	73.07
2011	3.3 billion**	310 billion (made on the basis of subsidies paid throughout August 2009–December 2011)	–	104.75

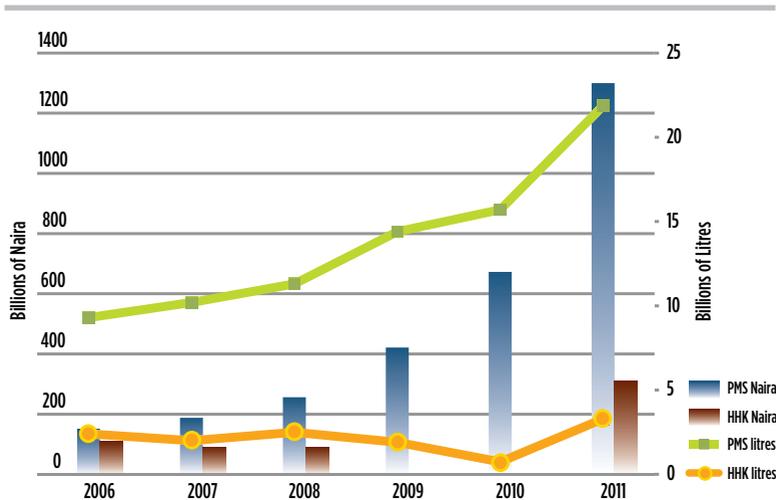
\* ₦90.4 billion: Payments represent January–July 2008. See PMS Table 1 above.

\*\* HHK subsidy was suspended by a presidential order in August 2009. This means that no subsidy payments were supposed to have been made since this time. However, the NNPC claimed subsidy arrears covering the period August 2009 to December 2011 in February 2012 amounting to ₦310 billion (US\$1.9 billion).

Sources: PPPRA (2008a); PPPRA (2012d); OPEC (2012a); OPEC (2012b).

Despite the kerosene subsidy regime, retail prices of HHK across the country have been far above the government-approved price of ₦50 per litre. Costs range from ₦100 to ₦250 (US\$0.62 to US\$1.55) per litre, depending on the location, with only the NNPC petrol stations and a few retailers in Lagos, Port Harcourt and Abuja selling at the approved regulated prices (Nwachukwu, 2012). This is because the subsidy has, in effect, disappeared into a black market. The Technical Committee on Payment of Fuel Subsidies, a body set up by the federal government to review the administration of petroleum products subsidies (different from the House Ad Hoc Committee led by Farouk Lawan), has stated that the NNPC (the sole importer of HHK) sold products to depot owners rather than retail outlet owners as required by regulation. The committee maintains that “two-thirds of the kerosene sold by NNPC between 2009 and 2011 was sold to depot owners and ‘middle-men’ who in turn sold the product to owners of retail outlets at inflated prices of between ₦115.00 and ₦125.00 per litre” (Nwachukwu, 2012). This drove pump prices within the period to an average of about 300 per cent above the regulated price of ₦50 per litre.

Figure 5 » Summary of Fuel Consumption and Subsidy Costs for PMS and HHK, 2006–2011



Source: PPPRA (2008a); PPPRA (2012d)

Notes: \*The HHK subsidy was suspended by a presidential order between August 2009 and December 2011. However, NNPC claimed subsidy arrears covering same period in February 2011 amounting to ₦310 billion (US\$1.9 billion).

\*Data has been computed from different documents from the PPPRA.

### 2.3.3 How are Petroleum Product Subsidies Administered? The Agencies and Processes Behind Subsidizing PMS and HHK

The payment of petroleum product subsidies is financed through a fund called the Petroleum Support Fund (PSF). The fund was created by the federal government in January 2006 to help stabilize the price of petroleum products in Nigeria and enhance their availability. It is managed by the PPPRA.

The fund is provided for in the federal budget and contributed to by all three tiers of government (local, state and federal government). It is supplemented from surpluses during periods of “over-recovery.” Over-recovery is possible because of the way the subsidy is administered: upon delivery, “pre-audit” payments are made based on a PPPRA-approved benchmark price for landing costs, known as the “ex-depot price.” The actual landing cost is subsequently calculated. If the ex-depot payment is too low, marketers are paid the money they are due. If the ex-depot payment is too high, marketers must give back the excess they have received, which is then placed in the PSF. This system was adopted in order “to minimize the turn-around processing time for subsidy claim payments to marketers” (PPPRA, 2012d). For the PSF’s inception, a provision of ₦150 billion (US\$0.9 billion) was made in the 2006 Appropriation Bill (PPPRA, 2012d).

A large number of agencies and processes are involved in the administration of the subsidies for PMS and HHK in Nigeria. The Department of Petroleum Resources has the authority to grant import licenses to marketers who satisfy licensing requirements. The PPPRA authorizes importation after ascertaining supply deficits and the needed import quantity, and grants supply quotas to licensed marketers. The Nigerian Navy gives the necessary clearance for tankers to enter into Nigerian waters while the Nigerian Customs Service issues clearance to discharge products with the quantity stated. The Nigerian Ports Authority levies the relevant administrative charges at the ports. Import supplies are accounted for by the PPPRA and importers (marketers) while government-appointed auditors (inspection agents) verify the quantities and value of the imported goods. The Federal Ministry of Finance authorizes payments after reviewing the inspection reports, while the Central Bank of Nigeria acts as the custodian of the PSF (PPPRA, 2008a), and payment confirmation and remittance. The Debt Management Office is responsible for the issuance of Sovereign Debt Notes and guarantees marketers’ payments within 45 days of issuance of the Sovereign Debt Note (PPPRA, 2008b). For a full description of this complicated process, see Appendix I: Petroleum Support Fund (PSF) – Institutional Linkages (PMS subsidy payment process).

### 2.3.4 Electricity

It is difficult to estimate the scale of electricity subsidies in Nigeria. This is in part because the government does not provide specific payments to electricity agencies to compensate for low-cost electricity pricing. Instead, electricity agencies are provided with lump sum amounts each year to carry out all activities.

Foster & Pushak (2011) have estimated the cost of electricity subsidies between 2005 and 2009, based on the assumption that the average total cost of electricity generation should be roughly ₦23 per kilowatt hour (kWh) (US\$0.14 per kWh). This benchmark is used to estimate the extent to which the average tariff is effectively a subsidy. This method (see Table 3 and Figure 6 below) concludes that electricity subsidies have been in the range of ₦232.5–356.5 billion (between US\$ 1.5–2.3 billion) across this period.<sup>2</sup>

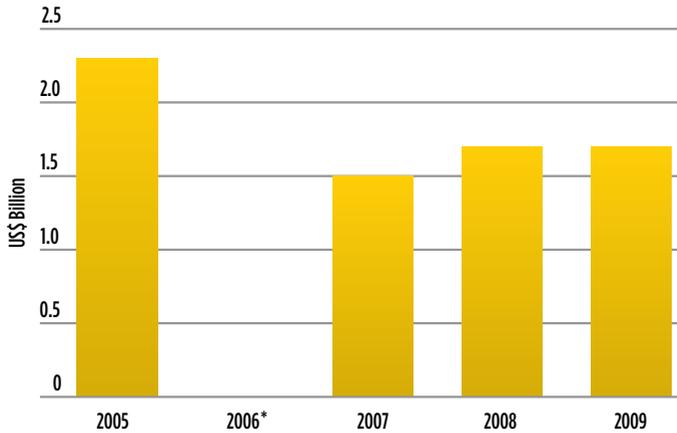
Table 3 » Cost of Electricity Subsidies, 2005–2009

	Average total cost (US\$/kWh)	Average effective tariff (US\$/kWh)	Effective subsidy (US\$/kWh)	Load served (GWh/year)	Total subsidy (US\$ billion)
2005	0.15	0.042	0.108	21,402	2.3
2006	no data	no data	no data	no data	no data
2007	0.15	0.048	0.102	14,901	1.5
2008	0.15	0.051	0.099	16,712	1.7
2009	0.15	0.047	0.103	16,652	1.7

Source: Adapted from Eberhard, Foster, Briceno-Garmendia, Ouedraogo, Camos & Shkaratan (2009).

<sup>2</sup> ₦/US\$ conversions as reported by Foster & Pushak (2011).

Figure 6 » Cost of Electricity Subsidies in Nigeria, 2005–2009



\*2006 data unavailable

Source: Adapted from Eberhard, Foster, Briceño-Garmendia, Ouedraogo, Camos & Shkaratan (2009) in Foster & Pushak (2011).

The subsidy has traditionally been paid for by starving electricity utilities of the funds needed for maintenance and reinvestment, as well as through under-pricing the natural gas that is sold to the power sector. In 2012 prices have been reported at about US\$0.12 (₦19) per million British Thermal units (mmBTu) of gas, equal to around 2 per cent of the equivalent cost of energy in barrels of oil. It has been estimated that such under-pricing amounts to an annual subsidy of US\$50–90 million (₦8.1–14.5 billion) a year (Machunga-Disua & Machunga-Disua, 2012).

Significant public funds have been lost due to problems related to the administration of the subsidy. To date, the government has often made late payments to energy utilities. According to the industry regulator, the Nigerian Electricity Regulatory Commission (NERC), the failure to make timely payments has also starved the utility industry of revenue (Ohiare, n.d.). At one point in 2010, a subsidy debt of ₦109 billion (US\$0.7 billion) was due to the utility companies (Ohiare, n.d.). A lump sum of ₦177 billion (US\$1.1 billion) was unilaterally imposed by the industry regulator as

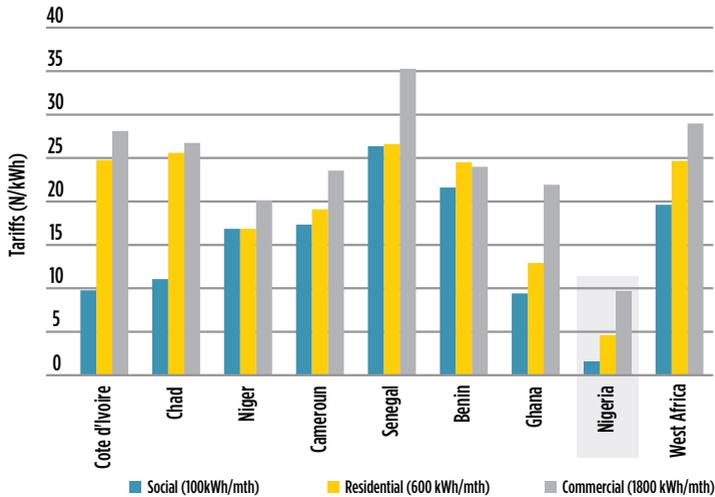
subsidy for the period 2009–2012 to meet the shortfall that arises as a consequence of tariffs being below unit production costs for all consumers (Tallapragada, 2009). The failure of the electricity generator to bill and collect bills from energy users has represented another loss of revenue, over and above the already low pricing. In 2005 only 64 per cent of billed revenues were actually collected (Foster & Pushak, 2011).

Another challenge in describing electricity subsidies is the fact that the country is in the midst of changing its pricing system. The following sections describe how Nigeria used to set prices and the changes that it is in the process of making.

### 2.3.4.1 The Old Regime

Nigeria's electricity supply industry has been under central control of the state since its creation. At different times, however, the sector has been managed by different designated agencies of government. These agencies coordinate the generation, transmission and distribution aspects of the electricity supply industry. From the mid-1990s until 2002, tariffs varied between averages of ₦1.5/kWh and ₦4.5/kWh (US\$0.01 and US\$0.03) for residential and commercial consumers, with the latter being on the higher end of the tariff band (Presidential Advisory Committee, 2006). In 2002 tariffs were adjusted from an average of ₦4.5/kWh to an average of ₦6/kWh (US\$0.04/kWh) (NERC, 2008). Despite these increases in prices, tariffs were still far from covering the full cost of production. This is clear when the price of electricity in Nigeria is compared with prices in other West African countries (see Figure 7). It is estimated that the actual cost of production is around ₦22–24/kWh (US\$0.14–0.15) (Alike, 2012).

Figure 7 » Electricity Prices in Countries of the West African Sub-region, 2009



Source: Adapted from Union of Producers, Transporters and Distributors of Electric Power in Africa (2009).

### 2.3.4.2 The New Regime: The Multi-Year Tariff Order and Lifeline Tariffs

Since 2005 Nigeria has been transitioning to a more competitive electricity sector, with a pricing regime that will fully cover the costs of production. This transition began with the Electric Power Sector Reform Act, which set out provisions for the unbundling of the national power utility into six generation companies (Gencos), one transmission company (Transco) and eleven distribution companies (Discos), to be regulated by the NERC (Federal Republic of Nigeria, 2005).

This process was followed in 2008 by a 15-year roadmap towards cost-reflective tariffs, called the Multi-Year Tariff Order (MYTO). The first two phases, 2008–2011 and 2012–2017, are designed to keep consumer prices relatively low, though still affecting price increases in a gradual manner (NERC, 2008; Tallapragada, 2009; Oni, 2012). The final regime is intended to provide the necessary incentives for power producers and investors to operate and maintain electricity infrastructure.

Despite its goal to make sure that tariffs cover all costs, the system still envisages the use of some subsidies to maintain a “lifeline” tariff for low-income consumers and a system to protect consumers against “price shocks” (the effects of sudden hikes in tariffs) (Federal Republic of Nigeria, 2005; NERC, 2008; Alike, 2012). Efforts have also been made to improve revenue collection, with 88 per cent of bill revenues being collected by the late 2000s (Foster & Pushak, 2011).

Currently, the tariffs envisioned by the MYTO are differentiated across five broad categories of consumers—residential, commercial, industrial, special and street lighting—and by the 11 distribution zones, corresponding to the 11 Discos. Consumers in each category face two charges: one a monthly fixed charge and the other an energy charge per kWh of electricity they consume. The new monthly fixed charge replaces the “meter maintenance” fees paid under the MYTO 1. The size of both charges—fixed and energy—is further differentiated according to the amount of electricity that a household consumes. See Table 4 for an illustration of the development of the new tariff system in the Ikeja distribution zone.

Following the commencement of the second phase of the MYTO implementation on June 1, 2012, citizens in subcategory R1—that is, those “lifeline” residential consumers who use 50 kWh of electricity or less—began to pay only a flat rate of ₦4 (US\$0.02) per kWh, a reduction from the ₦7 (US\$0.04) per kWh paid under MYTO 1 (Alike, 2012). The newly introduced fixed rates for electricity consumption are also completely subsidized for this R1 subcategory (NERC, 2012d).

A second subcategory of residential consumers, R2, defined as those with electricity demands above 50 kWh but less than 200 kWh, also enjoy partial subsidies on their tariff rates. As of 2012, they pay between ₦11/kWh and ₦13/kWh (US\$0.07–0.08) (Alike, 2012).

A third subcategory of consumers enjoying partial subsidies are artisans and small- and medium-scale entrepreneurs in commercial class C1. As of 2012, they pay between ₦15/kWh and ₦17/kWh (US\$0.09–0.11) depending on their distribution zone (NERC, 2012d).

The cost of these subsidies is to be paid for by “cross-subsidizing”—charging slightly higher tariffs for other classes of consumers (NERC, 2012b). The new pricing regime will see certain subcategories of consumers, particularly those with maximum-demand meters (and those who also take electricity supply direct from transformers), pay slightly above the average unit cost of energy (₦24/kWh) to further subsidize the R1, R2 and C1 subcategory consumers (NERC, 2012d; Alike, 2012).

**Table 4 » Electricity Tariffs Under the MYTO 2 for All Consumer Classifications in the Ikeja Distribution Zone, 2012–2015**

	Years 2012		2013		2014		2015	
	Fixed Charge, ₦/month	Energy Charge, ₦/ kWh	Fixed Charge, ₦/month	Energy Charge, ₦/ kWh	Fixed Charge, ₦/month	Energy Charge, ₦/ kWh	Fixed Charge, ₦/month	Energy Charge, ₦/ kWh
<b>Residential R1</b> Life-Line (<50kWh)		4.00		4.00		4.00		4.00
<b>Residential R2</b> Single and 3-phase (50 kWh – 600 kWh)	500	12.45	750	12.83	895	13.21	1,067	13.61
<b>Residential R3</b> Low Voltage Maximum Demand	17,513	21.84	26,269	22.50	31,332	23.17	37,371	23.87
<b>Residential R4</b> High Voltage Maximum Demand (11/33 KVA)	109,449	21.84	164,174	22.50	195,818	23.17	233,561	23.87
<b>Commercial C1</b> Artisans, Entrepreneurs, SMEs (Single and 3-phase)	500	16.56	750	17.06	895	17.57	1,067	18.01
<b>Commercial C2</b> Low Voltage Maximum Demand	15,876	20.30	23,814	20.91	28,404	21.54	33,879	22.18
<b>Commercial C3</b> High Voltage Maximum Demand (11/33 KVA)	99,224	20.30	148,835	20.91	177,523	21.54	211,740	22.18

Continued...

Table 4 » Electricity Tariffs Under the MYTO 2 for All Consumer Classifications in the Ikeja Distribution Zone, 2012–2015 (Continued)

	Years 2012		2013		2014		2015	
	Fixed Charge, ₦/month	Energy Charge, ₦/ kWh	Fixed Charge, ₦/month	Energy Charge, ₦/ kWh	Fixed Charge, ₦/month	Energy Charge, ₦/ kWh	Fixed Charge, ₦/month	Energy Charge, ₦/ kWh
<b>Industrial D1</b> Single and 3-phase	500	16.38	1,000	16.87	1,193	17.38	1,423	17.90
<b>Industrial D2</b> Low Voltage Maximum Demand	97,626	21.28	195,252	21.92	232,887	22.58	277,775	23.25
<b>Industrial D3</b> High Voltage Maximum Demand (11/33 KVA)	99,224	21.28	198,447	21.92	236,697	22.58	282,320	23.25
<b>Special 1</b> Single and 3-phase	500	15.68	750	16.15	895	16.63	1,067	17.13
<b>Special 2</b> Low Voltage Maximum Demand	35,938	15.68	43,125	16.15	51,437	16.63	61,352	17.13
<b>Special 3</b> High Voltage Maximum Demand (11/33 KVA)	43,750	15.68	65,625	16.15	78,274	16.63	93,361	17.13
<b>Street Lighting S1</b> Single and 3-phase	500	12.04	650	12.40	775	12.77	925	13.16

In addition to lifeline tariffs, the new regime also offers consumers a built-in mechanism for price increases. This sets out provisions for annual adjustments to all tariffs when there is a greater than 5 per cent change in inflation, the cost of fuel or exchange rates (NERC, 2008). This is intended to ensure that the system will continue to raise enough funds to cover production costs, while giving consumers certainty over prices in the short term and an opportunity to adjust to price fluctuations. As it creates a lag in pass-through of price changes, this may be considered as a sort of temporary subsidization of the actual market cost of electricity before prices become entirely reflective of costs (see Table 4).

Despite earlier intentions to end all electricity subsidies by 2012 (Sanni, 2010; LightUpNigeria, 2010), cross subsidies have not been operationalized because tariffs remain too low. Instead, an allocation of ₦110 billion (US\$0.68 billion) has been announced recently by the federal government under the MYTO 2 as a subsidy for electricity consumption for the next two years. A report from the regulator states that it negotiated this amount with the federal government with respect to subsidies for the new electricity tariffs of R1, R2 and C1 consumers, amounting to ₦60 billion (US\$0.37 billion) in 2012 and ₦50 billion (US\$0.31 billion) for 2013 (NERC, 2012a).

A timeline has also been set out for increasing the price of natural gas. This would see prices rise on average once per year from a rate of US\$ 0.2 per mmBTU in 2010 to US\$ 2.00 per mm BTU by the end of 2013. According to recent reports, however, these price rises are not being followed (Reuters, 2012).

### 2.3.5 How is the Electricity Subsidy Administered?

The new subsidy regime described above is administered by a fund known as the Power Consumer Assistance Fund (PCAF), managed by NERC. The PCAF provides subsidies to underprivileged power consumers as specified by the Minister of Power. According to the Electric Power Sector Reform Act (Federal Republic of Nigeria, 2005), there are two sources of capital. The first is contributions delivered by “cross-subsidies,” where the cost of lifeline tariffs is paid for by charging slightly higher rates to other classes of consumers. The second source of funds into the PCAF is direct subsidy allocations by the federal Government of Nigeria, as appropriated by the National Assembly. In practice, the second source of subsidies has been put to use as the mechanism for funding lifeline tariffs, as cross-subsidies have yet to become operational.

# 3

## ARE ENERGY SUBSIDIES GOOD FOR NIGERIANS?



### 3. Are Energy Subsidies Good for Nigerians?

Whether or not energy subsidies are good for Nigerians requires weighing a host of costs and benefits. In the following pages, we look at how energy subsidies benefit different economic classes, impact economic growth and affect environmental sustainability over the short and long terms.

#### 3.1 Who Benefits from Energy Subsidies?

In Nigeria, subsidies to gasoline and kerosene are “universal,” in the sense that no attempt has been made to target the subsidy at poor or vulnerable groups. As a result, the benefits flow disproportionately to those who consume more fuel, which tends to be higher income earners. However, it must be borne in mind that the poverty rate in Nigeria is also very high: of its 162 million people, about 68 per cent live on less than \$1 a day and about 85 per cent on less than \$2 per day (World Bank, 2011). This means that a sizeable number of people who have access to the subsidy do have very low incomes. In the absence of social safety systems, most Nigerians consider fuel subsidies to be the country’s principal welfare mechanism. It also represents the closest thing to a resource transfer payment, allowing ordinary Nigerians to benefit from the country’s oil wealth.

Energy typically represents a significant proportion of household expenditure (see Table 5). The cost of different fuels will affect expenditure in different ways. Cheap gasoline primarily provides benefits by reducing the costs of transport and of energy-consuming economic sectors like agriculture and fisheries. Even where people do not own vehicles, it still provides indirect benefits by reducing the cost of public transport like minibuses, taxis and “Okada” (motorcycles and scooters). This creates economic opportunities by enabling more travel and sustaining jobs for drivers. Cheap gasoline can also provide indirect benefits by reducing the cost of goods that require transportation, such as food (Iwaro & Mwasha, 2010).



Table 5 » Average Breakdown of Nigerian Household Expenditures

Area of Expenditure	% of Total Expenditure	
	Urban	Rural
Rent	16.2	9.0
Food	55.4	72.0
Water	0.3	0.0
Clothing	4.9	4.7
Household Goods	3.7	4.8
Other Services	6.9	2.6
Health Expenditure	0.7	0.8
Education Expenditure	0.7	0.5
Entertainment	0.5	0.2
Energy		
Fuel Light	6.0	3.2
Transport	4.9	2.3
<b>Total</b>	100	100

Source: (National Bureau of Statistics, 2012).

The majority of benefits, however, are likely to accrue to the better off, who can afford to purchase gasoline at quantity. The poor are unlikely to purchase gasoline at all, and can only hope to capture indirect benefits. There is no guarantee of the extent to which indirect benefits related to fuel subsidies will be passed on to final consumers. Producers of food, for example, may have lower costs of production because of cheap transport fuel, but this does not necessarily mean they will lower their product prices accordingly. Or the subsidized fuel may “leak” to be used for unintended purposes.

Indeed, some benefits are not even captured by Nigerians: large quantities of oil products are smuggled across Nigeria’s borders and sold for a profit in neighbouring countries. It is believed that about 24 million litres of fuel are lost to smugglers and black market racketeers on a daily basis (8.7 billion annually). This is valued at more than US\$4 billion (₦645 billion) a year (Jukwey, 2012; House of Representatives, 2012).

More so than gasoline, household kerosene is a more important fuel for average households, many of whom use it in cooking stoves. It represents more than 80 per cent of the fuel mix from non-renewable resources used for cooking (UNFCCC/CCNUCC, 2012). This is because more than 100 million Nigerians are unable to afford gas (in liquefied petroleum gas [LPG] cylinders) and rather make use of cheap kerosene stoves and other traditional cooking fuels like wood and biomass (Drury, 2012).

In addition to savings on expenditure, kerosene can also benefit households if it replaces traditional biomass such as firewood, charcoal or dung, it can also provide health and economic benefits: it burns more cleanly than wood (despite being a toxic fuel itself when compared to modern cooking fuels like LPG) and can reduce serious respiratory and eye illnesses associated with the burning of biomass. It can also free up time that would otherwise be spent collecting fuel wood.

As with gasoline, however, there is no guarantee that the benefits of cheap kerosene will reach Nigerians. When prices are low, kerosene can be diverted to other sectors, such as the aviation sector, or hoarded by marketers (Nwokocha & Ochnogor, 2011; Okafor, n.d.). In many countries, subsidized kerosene is used to adulterate diesel fuel and to reduce the cost of using diesel (Bacon & Kojima, 2006). And, as explained in Section 2.3.2, in most of Nigeria the price of ₦50 (US\$0.31) per litre that is supposed to be provided by the subsidy has in fact not been passed through to consumers, with costs in the country instead ranging from ₦100–250 (US\$0.62–1.55) per litre. This means that, in reality, it is unlikely that the poor receive much benefit from the subsidy on HHK, as they do not pay cheap prices.

In theory, electricity subsidies are more targeted than fuel subsidies, following the new pricing regime set out by the MYTO. The greatest price support is provided to people who consume the least electricity—the poorest consumers. However, in practice, like petroleum products, the benefits of electricity subsidies are also limited by access issues: only 50 per cent of the population is connected to the electricity grid and supply is highly unreliable (Foster & Pushak, 2011).

The net benefits of energy subsidies must also take into account the opportunity costs of subsidization: money spent on making energy cheap cannot be spent on other priorities. Currently, fuel subsidies are so expensive that they are threatening the fiscal stability of the Nigerian government. The Central Bank of Nigeria estimates losses related to fuel subsidies in 2011 at over ₦2 trillion (US\$12.4 billion) (Iba & Otti, 2011). This amount represents over 39 per cent of the Government of Nigeria's expenditure in 2011. The ultimate ramifications of this may be severe for the poor, as other welfare spending in areas such as healthcare and education becomes unaffordable over the medium and long terms.



## 3.2 What About Economic Development?

Subsidies are often established to promote economic activity by increasing production and consumption. Consumers, for example, may benefit from gaining access to goods or services that would otherwise be out of reach. Businesses benefit from subsidies that reduce the costs of their productive activities.

But there are also costs to using energy subsidies to promote economic activity. At a macroeconomic level, energy subsidies—particularly gasoline and kerosene subsidies—impose huge fiscal strains on the Nigerian government in recent years, as illustrated above.

Increased domestic demand due to subsidies contributes to increased consumer demand, reducing the increasing the reliance on imports and so depleting the country's foreign reserves. Even if Nigeria subsidizes fuel produced domestically, this still foregoes foreign reserves that would otherwise have been collected if it were sold internationally at world market prices. Between 2010 and 2011, the country's foreign reserves had been so depleted that it is reckoned that a serious economic crisis would take place if oil prices fell.

Energy subsidies also undermine private and public investment in the energy sector. Fuel price subsidies are the leading reason that the crude petroleum refining sector cannot attract investment. The sector languishes for lack of funds, increasing fuel imports, which in turn worsen the fiscal burden.

Similarly, the state of the electricity sector in Nigeria can be in part attributed to under-charging for consumer tariffs: in the past, not enough money has been raised to pay for maintenance and reinvestment in capital, resulting in low-quality supply (NERC, 2011). In the words of NERC (2012d): “The absence of a cost-reflective tariff is a key reason for the failure of the power sector to serve Nigerians for the past three decades.”

The cost of this to the economy has been the need to use high-cost private generators. According to a national report, “self-generation of electricity (from diesel and petrol generators) is conservatively estimated at a minimum of 6,000 MW, i.e. more than twice the average output from the grid during 2009” (Presidential Action Committee on Power & Presidential Task Force on Power, 2010).

In addition, the under-pricing of the natural gas used by the electricity sector has contributed to the problem of “flaring”—that is to say, the burning of gas that is produced during oil extraction, instead of harnessing it and selling it as an energy source. The low economic value of the gas means there is little incentive to invest in the infrastructure that would be needed to store and transport it. As of 2012, Nigeria flares the second largest quantity of gas in the world, second only to Russia (Global Gas Flaring Reduction, 2012).

## Box 1 » Corruption: Fuel Subsidy Regime

The inherent risk of fraud in subsidy regimes has become quite evident given recent reports of the fuel subsidy probe conducted by the federal House of Representatives ad-hoc committee between January and April 2012. The committee, headed by the Hon. Farouk Lawan—who is now in turn under serious allegations of bribery and corruption in relation to this probe—was commissioned to investigate the subsidy regime of PMS and HHK based on the federal government’s claim that it cannot continue to make colossal payments into “the seemingly bottomless pit” (House of Representatives, 2012) of petroleum subsidies.

The House committee report found a high disregard for the statutory requirements and qualification guidelines for petroleum product suppliers, leading to a massive abuse of the subsidy funds between 2009 and 2011. Contrary to the official figure of ₦1.3 trillion (about US\$8.1 billion), the committee established a subsidy payment figure of ₦2.5 trillion (about US\$15.5 billion) on December 31, 2011, amounting to more than 900 per cent over the ₦245 billion (US\$1.52 billion) that had been budgeted for gasoline (PMS) subsidies for the year.

On submission, the House committee investigation found that the NNPC, the state-owned oil company, and its agencies “allegedly increased the subsidy payable to its suppliers and marketers, including those who did not supply any products” (House of Representatives, 2012). The PPPRA reported that annual PMS consumption in 2011 totalled 14.8 billion litres, but records revealed that certain marketers had collected subsidies totalling over ₦230 billion (about US\$1.4 billion) on a PMS volume of 3.3 billion litres that were not supplied (House of Representatives, 2012). In another event, the accountant-general that served during the review period 2009 was found to have made payments of equal installments of ₦999 million (about US\$6.2 million) a record 128 times within 24 hours on January 12 and 13, 2009, totalling ₦127.87 billion (about US\$0.8 billion). Within this period, only 36 marketers were participants under the PSF scheme, each with different petroleum product import and supply capacities. This makes the logic of equal payments inconceivable, even if there were 128 marketers.

Continued...

## Box 1 » Corruption: Fuel Subsidy Regime (Continued)

For kerosene (HHK) subsidy payments, the committee observed that despite having been discontinued by a 2009 presidential directive, the NNPC paid itself some ₦310 billion (about US\$1.9 billion) for the period of 2009 to 2011 (House of Representatives, 2012).

While recognizing the severity of these problems, it can hardly be said that this corruption is caused by or particular to fossil-fuel subsidies. The Government of Nigeria has a poor governance record that makes corruption endemic—with or without subsidies. The country has consistently scored around 2.4 out of 10 on Transparency International's Corruption Perception Index, ranking 143 out of 182 countries in 2011 (Transparency International, 2011). Were funds not spent on energy subsidies—and channelled into other public spending priorities—it is hard to say whether opportunities for corruption might be fewer or more abundant. It is certainly clear, however, that subsidies create a system in which corruption can flourish.

### 3.3 What About the Environment?

The impact of energy subsidies on the environment is complex, and results from the impacts that subsidies have on energy choices and consumption levels. Oil product subsidies incentivize the consumption of fuel and, in doing so, increase fossil-fuel-related greenhouse gas emissions and local air pollution. While the international community is increasingly concerned by climate change, this is not a high priority for Nigeria: although the world's 44th biggest emitter of carbon dioxide, this amounts to only 0.2 per cent of total global emissions; and the basis of emissions per capita, Nigeria ranks at 174th out of a total of 214 countries (2008 figures; United Nations, 2012)

Incentivizing the use of kerosene may improve air quality at the household level, as the main alternative cooking fuel—biomass—contributes to serious respiratory health problems, particularly for women and children. According to the United Nations Development Programme and the World Health Organization, two million deaths per year can be attributed to solid fuels; half a million deaths were caused in sub-Saharan Africa alone in 2004 (Legros, Havet, Bruce & Bonjour, 2009).

Of course, kerosene subsidies are not the only option to mitigate indoor air pollution. Some countries have addressed the problem by introducing stoves that burn more cleanly or incentivizing the use of renewable energy technologies (Global Alliance for Clean Cook Stoves, 2012; Community Research and Development Centre, 2008). It is also possible that subsidizing kerosene may lead to other perverse outcomes. For example, when kerosene is cheaper than diesel, it can be used to adulterate diesel. This can cause engines to malfunction, components to fail, and increase tailpipe emissions and toxic substances. Indirectly, it may actually increase dependence on biomass fuel, if the diversion of kerosene makes it less available and affordable for household use (Osueke & Ofondu, 2011).

Electricity subsidies affect the environment because of the way that under-pricing has led to under-investment in the sector. Many businesses and households rely on diesel and gasoline generators because of the poor quality of supply, and this increases levels of local pollution. The under-pricing of natural gas for electricity generation also incentivizes “flaring,” which has serious harmful environmental impacts on local communities. Impacts include the release of particulate matter and a range of toxic combustion by-products and unburned fuel components. It has also been linked to leukemia and other blood-related disorders (Environmental Rights Action & Friends of the Earth Nigeria, 2005).



# 4

**WHAT COULD  
BE EXPECTED  
FROM ENERGY  
SUBSIDY REFORM  
IN NIGERIA?**



## 4. What Could be Expected from Energy Subsidy Reform in Nigeria?

### 4.1 General Impact of Energy Subsidy Reform

The impact of subsidy reform will vary depending on the nature of the reform. Sudden price changes tend to have the greatest impact on vulnerable consumer groups. Price hikes will also translate into higher input costs for businesses, affecting their profits and sales.

On the other hand, reform will also result in fiscal savings, which can be used to mitigate the negative impacts of reforms on consumers and businesses, redirecting savings into social welfare programs and other economic activities. There are strong arguments to be made that reform would result in positive economic outcomes, particularly given the impact that subsidies have had on investment in the refining, electricity and gas sectors, and the attendant impacts on energy availability and affordability in Nigeria.

If fiscal savings are used for the benefit of consumers and businesses, net social impacts should be positive, by achieving better socioeconomic outcomes than the subsidy regime. Such interventions must be well designed and administered, however, to avoid the mistargeting of benefits or the loss of funds to corruption.

### 4.2 What Plans Has the Government of Nigeria to Reform Subsidies?

#### 4.2.1 Reform of PMS Gasoline Subsidies

The Government of Nigeria has stated that it aims to entirely remove the subsidy on PMS gasoline, moving to a fully liberalized pricing system. This was attempted on January 3, 2012, when President Goodluck Jonathan announced the removal of the gasoline subsidy. The announcement was quickly followed by national protests. Ultimately, the government relented and decided to partially reinstate the subsidy.



To mitigate the impacts of price increases, the government has proposed a Subsidy Reinvestment and Empowerment Programme (SURE-P). The objective of this program is to provide support to different parts of the population through a range of programs, including the financing of infrastructure and the creation of job opportunities for unemployed youths.

The estimated funding needed to implement SURE-P was ₦1.34 trillion (US\$8.3 billion), which is the expected savings from the federal budget once the gasoline subsidy was removed. However, since the subsidy was partially reinstated, funding had to be reduced to ₦426 billion (US\$2.6 billion), necessitating a review of the program (BusinessNews, 2012). A committee headed by Christopher Kolade, the current Pro-Chancellor of the Lagos Business School, has been formed to review and implement SURE-P. The revised program now focuses on the following priority areas: maternal and child health programs, public works programs, mass transit schemes and vocational education programs. Additionally, ₦180 billion (US\$1.1 billion) was added to the federal budget of the current year to take care of the SURE-P (Federal Ministry of Finance, 2012). Contracts have also been awarded. Recently, ₦17.8 billion (US\$0.1 billion) was released by the federal government for mass transit schemes and youth empowerment programs (Onuba, 2012).

According to media reports, there is deep-seated public distrust of government plans and policies by the Nigerian populace, which extends to SURE-P (Fabiya, 2012).

#### 4.2.2 Reform of HHK Subsidies

The current status of the subsidy on household kerosene is uncertain. According to a presidential government directive in 2009, the policy was to be disbanded (House of Representatives, 2012). But as of 2011, the PPPRA has claimed funds for the subsidy, reporting that it is still in place (PPPRA, 2012b). There have been calls for the policy to be reinstated by the government committee investigating the administration of subsidies in Nigeria (House of Representatives, 2012).

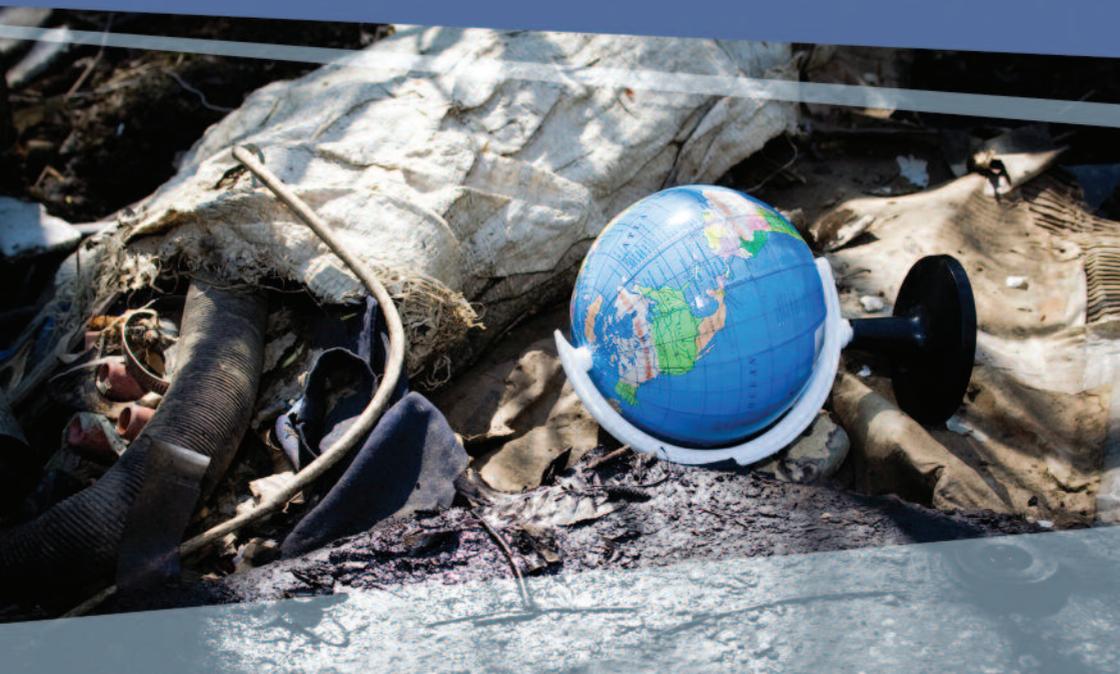
### 4.2.3 Reform of Electricity Subsidies

As described in Section 1, the reform of electricity subsidies in Nigeria is already underway and has been ongoing since 2005. This 15-year plan aims to establish a full cost-recovery tariff system that charges differentiated tariffs based on the geographical area, the type of consumer and the scale of consumption, providing “lifeline” tariffs for some residential and commercial consumers, to be paid for through cross-subsidies. Despite the existence of this plan, subsidies will still have to be paid for from the federal budget for 2012 and 2013, at a cost ranging from ₦1.75 billion to ₦7.75 billion (US\$0.01–0.05 billion), depending on the exact levels of consumption of lifeline consumers in different distribution zones (NERC, 2012b).



5

**WHAT CAN  
INTERNATIONAL  
EXPERIENCE TELL US  
ABOUT ENERGY  
SUBSIDY REFORM?**



## 5. What Can International Experience Tell Us about Energy Subsidy Reform?

Successful energy subsidy reform can be considered the long-term elimination of subsidies with minimal negative impacts. A wide set of international experience suggests that countries will have the best chance for successful reform if they establish a comprehensive plan that creates a new pricing mechanism, mitigates negative impacts through social and economic support policies, and addresses political obstacles (Laan, Beaton & Presta, 2010). A selection of these experiences is summarized below.

### 5.1 Pricing Mechanisms and Tax Structures

The ultimate goal of subsidy reform is price liberalization. A gradual phase-out of subsidies can give recipients time to adjust. 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, they should 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).

It may also be a gradual process for governments to develop new pricing mechanisms and energy taxation systems, as they transition from regulated prices with ad hoc adjustments to automatic pricing mechanisms and finally full pass-through of world prices and adequate levels of national taxation. This allows governments to extricate themselves from energy pricing in a controlled manner.

Table 6 and Table 7 summarize recent international experience with pricing mechanisms and how tax adjustment has been used to partially manage price volatility in some countries.

Table 6 » International Experience with Pricing Mechanisms

China	Indonesia	Jordan	South Africa	Turkey
National Development and Reform Commission (NDRC), the administrator, considers price adjustments when three benchmark crudes move more than 4 per cent within 22 working days. NDRC includes political, social and economic considerations. International crude prices rose 70 per cent between January 2009 and October 2011, while fuel rose 50 per cent.	Prices for premium gasoline (RON 88) and diesel for non-industrial consumers are set on an ad hoc basis. Major price increases in 2005 and 2008 were not accompanied by a link to world prices and subsidies re-emerged as a significant issue as oil prices rose in 2010 and 2011.	Prices for petroleum products rose between 33 per cent and 76 per cent from 2005 to February 2008 (when most had reached international parity). Prices are set to a formula based on the international (Brent) crude. Administration is by a committee with representatives from three ministries and the state refinery company.	Government sets prices for all grades of petrol, diesel and illuminating paraffin using a pricing mechanism that is applied automatically and independently, free from government intervention for political, economic or social reasons.	An automated pricing mechanism was introduced in 1998 and allowed refineries to make a profit. In 2005, prices were fully liberalized across the sector and state refining and oil distribution companies were privatized. Distribution margins rose 60 per cent in the 20 months after liberalization.
<b>Lesson(s)</b> Governments often retain political influence over automatic pricing regulation.	If no link to world prices is made, subsidies will re-emerge when world prices rise.	Subsidies for transport fuels were eliminated progressively over a 3-year period.	Automated mechanism widely considered to have functioned well over the years.	Price liberalization is the best option to eliminate subsidies, but it requires oversight to be fully effective.
Sources Government of China (2008); Aizhu (2011)	Global Subsidies Initiative (forthcoming); Husna (2011)	Baig, Mati, Coady & Ntamungiro (2007); Arze del Granado, Coady & Gillingham (2010); Ragab (2010)	Department of Energy (n.d.); Baig, Mati, Coady & Ntamungiro (2007)	Oguz (2006); Baig, Mati, Coady & Ntamungiro (2007)

Table 7 » International Experience of Using Fuel Taxation to Manage Price Volatility

Brazil	Chile	China
<p>The government stabilizes prices through influencing the federal oil company (Petrobras) and through regular adjustments to taxes. The government reduced taxes to offset an increased price for Petrobras on November 1, 2011. Fuel taxes are generally set at the state level and are important to their revenue.</p>	<p>The government manages price volatility of the deregulated system to final consumers by a variable tax (the SIPC0) paid by consumers. This remains revenue-neutral over the medium term. The tax rate is calculated by comparing the 2-week average to the 5-month average.</p>	<p>In 2008 China took the opportunity to significantly increase taxes at a time of falling international crude prices, simultaneously increasing the consumption tax for oil products and abolishing several fees and charges for road use. In 2011 there was a move from volume-based to value-based taxation.</p>
<p><b>Lesson(s)</b></p> <p>Government can adjust taxes as part of pricing policy. Which branches of government revenues accrue to is important.</p> <p>Sources</p> <p>MercoPress (2011); Fick (2011); Rapoza (2011); de Sainte Croix (2012); Villela &amp; Barreix (2003)</p>	<p>Variable taxation can be used to smooth prices. Averaging prices over a 5-month period has been a sustainable methodology.</p> <p>Organisation for Economic Co-operation and Development (2011)</p>	<p>Declining world prices offer an opportunity for reform. A review of taxation more widely can be incorporated at the same time.</p> <p>Government of China (2008); Business Monitor International (2009)</p>

## 5.2 Mitigating Economic and Social Impacts

Reducing energy subsidies would free up government funds for other purposes. By allocating these funds to programs that more efficiently target social welfare and businesses, the government can use less money to more effectively help those who are most in need.

Internationally, many reform efforts have focused on how to compensate social groups and businesses, as well as how to mitigate potential inflationary impacts of subsidy reform (see Table 8 and Table 9).

Table 8 » International Experience with Economic and Social Compensation Measures

Ghana	Indonesia	Iran	Jordan	Malaysia
<p>When fuel prices were raised in Ghana in 2005, the government provided a range of compensation schemes. These included eliminating fees for state-run primary and secondary schools, increasing the number of public-transport buses, putting a price ceiling on public-transport fares, channelling extra funds into a health-care scheme for poor areas, raising the daily minimum wage, starting rural electrification programs and purchasing essential equipment for workers.</p>	<p>Fuel price increases in 2005 and 2008 saw public compensation addressed mostly through cash transfers reaching 19 million households (approximately one third of the total). But social programs were also included—for example, support for health, education and infrastructure. Industrial and agricultural sectors were supported through value-added tax exemptions and increased farmer prices on some agricultural commodities and removal of certain road and transport charges.</p>	<p>Government concerns about the impacts of fuel price increases on businesses led to the systematic analysis of 12,000 enterprises. Compensation measures to selected sectors and activities included: direct financial assistance and reduced fuel prices for a limited time; soft loans for energy-saving technology adoption; lines of credit; reduced government fees and taxes; and export awards.</p>	<p>A compensation package worth 7 per cent of GDP was introduced over 2005–08. Measures included: bonuses to low-income government employees; cash transfers to non-government employees and pensioners; increased food subsidies and the retention of electricity subsidies; projects to combat unemployment and poverty. Subsidy removal was preceded by an extensive media campaign.</p>	<p>The government increased the fixed price of fuel in 2008 in response to record world prices. Cash grants were provided to fishermen and vessel owners to compensate in part for the fuel price increase. Rebates were also given to private vehicle owners, and favoured smaller vehicles.</p>
<p><b>Lesson(s)</b></p> <p>A comprehensive package of policies based on existing capacity can be put together to mitigate economic and social impacts.</p>	<p>It is possible to reach out to different sectors and social groups through a package of compensatory measures.</p>	<p>Potential impacts on business and agriculture are often significant government concerns. Specific mitigation measures can be designed and implemented.</p>	<p>State enterprises and employment offer channels for compensation. Media and communications campaigns increase the chances of implementation and sustainability of reform.</p>	<p>Government can choose to compensate those it decides are important for equity or political reasons.</p>
<p>Sources</p> <p>Coady et al., (2006); Ghana Web (2005); International Monetary Fund (2006) as quoted in Laan, Beaton &amp; Presta (2010)</p>	<p>Beaton &amp; Lontoh (2010); Global Subsidies Initiative (forthcoming)</p>	<p>Guillaume, Zytek &amp; Farzin (2011)</p>	<p>Arze del Granado, Coady &amp; Gillingham (2010); World Bank (2010)</p>	<p>Kojima (2011)</p>

# 5

## SECTION FIVE | WHAT CAN INTERNATIONAL EXPERIENCE TELL US ABOUT ENERGY SUBSIDY REFORM?

**Table 9 » International Experience with Policies to Mitigate Inflationary Impacts**

Brazil and Mexico	China	Indonesia	Iran	Thailand
<p>Conditional cash transfer programs in Brazil and Mexico were phased in gradually over many years, with payments linked to individual needs within the household.</p>	<p>China's 2008 price increases were timed when oil prices were falling. In 2010 government held back prices of bus, rail and airline services. It did not pass through the full international fuel price increases in 2010 and 2011. Major losses to government-owned refineries resulted, and some independent refineries reduced production, leading to scarcity and hoarding.</p>	<p>The government was compelled to raise prices in 2005 after sustained increases in international oil prices made domestic fuel subsidies untenable. The government acted quickly but avoided increases at times of peak annual inflation: the Ramadan and year-end holiday seasons.</p>	<p>Iran increased its energy prices several-fold at the end of 2010. The government was very concerned about inflation and used a variety of economic and market measures including: appreciating the Rial; stockpiling consumer goods and distributing public staples; timing reform for the low inflation period (November–December).</p>	<p>The government introduced free transport on non-air conditioned buses and third class trains as part of measures to help poor households. These fare decreases helped dampen impacts.</p>
<p><b>Lesson(s)</b> If compensation payments are made, targeting and phasing them in reduces the inflationary impact.</p>	<p>Governments can control inflation by intervening on final prices of goods and services, but suppliers can face losses and/or supply can be reduced.</p>	<p>Inflation varies seasonally and reform should be enacted in lower inflation periods where possible.</p>	<p>Though it may not be enough to contain inflationary impacts, governments have a wide range of measures available to mitigate inflationary pressure.</p>	<p>Governments can make very specific interventions to minimize inflationary impacts.</p>

**Sources**

The Energy and Resources Institute (2012)

Government of China (2008); China Daily (2010); Invest in China (2010); Reuters (2011); Bloomberg (2011)

Global Subsidies Initiative (forthcoming)

Guillaume, Zyttek & Farzin (2011); Nasserri (2012); Najmeh (2012)

Fernquest (2011)



Organizing and effectively implementing compensation measures can be complicated. Key factors to effectiveness are: good targeting (identifying the groups and individuals for inclusion), strong oversight and good support from administrative bodies and local communities. Compensation measures can also be vulnerable to inefficiencies and corruption, so transparency and accountability mechanisms are essential.

The best options for transitional support measures will be country specific, depending on the administrative capacity of the country and coverage of existing redistributive mechanisms.

## **5.3 Developing a Strategy to Enable Reform**

The way in which subsidies are eliminated can also ease the transition to market prices and build public support. Good practice suggests that governance, communications and monitoring of the impacts of implementation are all important elements of an implementation strategy.

### **5.3.1 Governance**

Good governance is fundamental to energy subsidy reform. Without good governance, claims that subsidy spending will be redirected in a fair and equitable way will lack credibility. Proponents of subsidy reform should support any efforts to improve energy sector governance and governance more generally. At the same time, improving governance can be a slow process, taking years or even decades. Due to the waste and inefficiencies associated with subsidies, it may not be practical to wait until governance issues are addressed before embarking on subsidy reform. International experience shows that some short-term steps can be taken for governments to improve their credibility and reduce opportunities for corruption.

Consultation 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, concerns about the implementation of subsidy reform can be addressed early on. Consultation also serves to raise awareness about the need for reform.

Careful sequencing of reform and compensation can significantly improve the credibility of reform plans. When Iran reformed its fuel subsidies in 2010, it provided compensation payments to around 80 per cent of the population. These were transferred to bank accounts over a month before the reform took place. Citizens could see the funds registered in their accounts but access was frozen until the day of the reform itself (Guillaume, Zytek & Farzin, 2011). By organizing and providing

compensation before the price increases took place, the Iranian government provided tangible evidence that it would follow through on its promise to mitigate the impacts of reform.

Finally, transparency is a key mechanism to improve credibility and reduce opportunities for corruption. The more information that is made available about the implementation of subsidy mechanisms and compensation mechanisms, the greater public scrutiny that can be applied to ensure they are functioning as intended.

### 5.3.2 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) (Kojima, 2009). In addition, governments should encourage competition in the retail sector by requiring filling stations to post prices on display boards.

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.

### 5.3.3 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.

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 (Laan, Beaton & Presta, 2010).

## 5.4 Conclusion

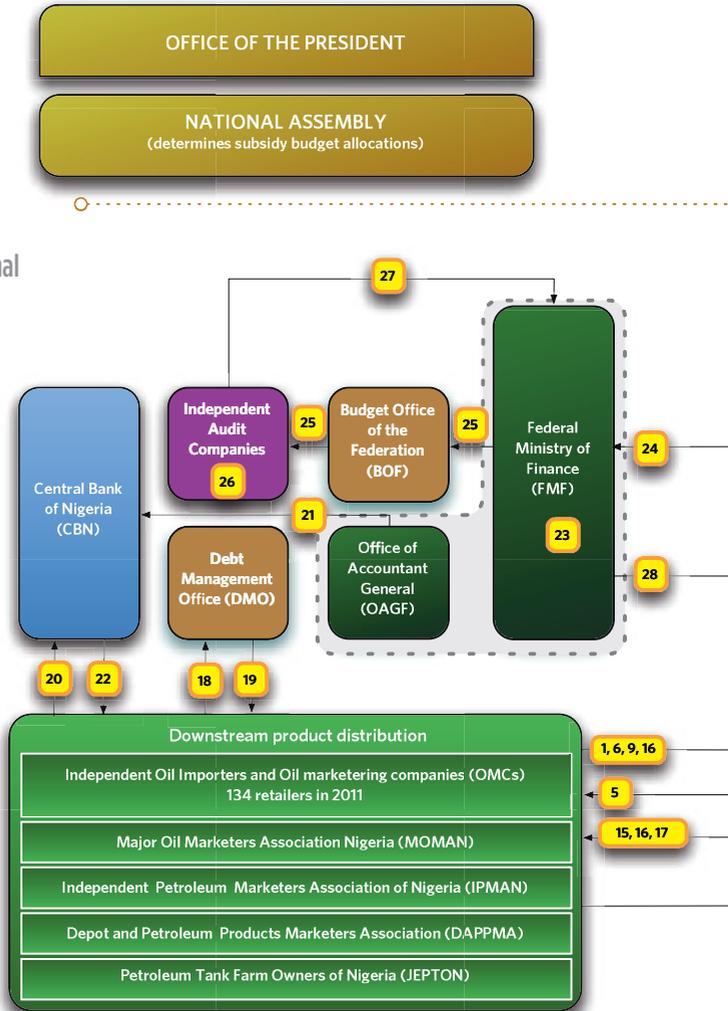
Nigeria's energy subsidies were put in place to make energy more affordable and to distribute the wealth from the country's fuel resources. However, with fuel subsidies alone being worth up to ₦2.19 trillion (US\$ 13.6 billion) in 2011, all subsidies are placing an increasing strain upon the Nigerian budget. Much of the expenditure is likely benefiting the well-off, who can afford to buy energy in larger quantities. In many cases, the subsidies are captured by administrators and middle-men and do not even reach consumer markets: for example, kerosene is supposed to be priced at ₦50 (US\$0.31) per litre, but is instead sold for between ₦100 and ₦250 (US\$0.62—1.55) in most parts of the country. In addition, subsidies have had serious impacts on investment in Nigeria's energy sector, with ramifications for the economy and the availability of energy for Nigerian citizens.

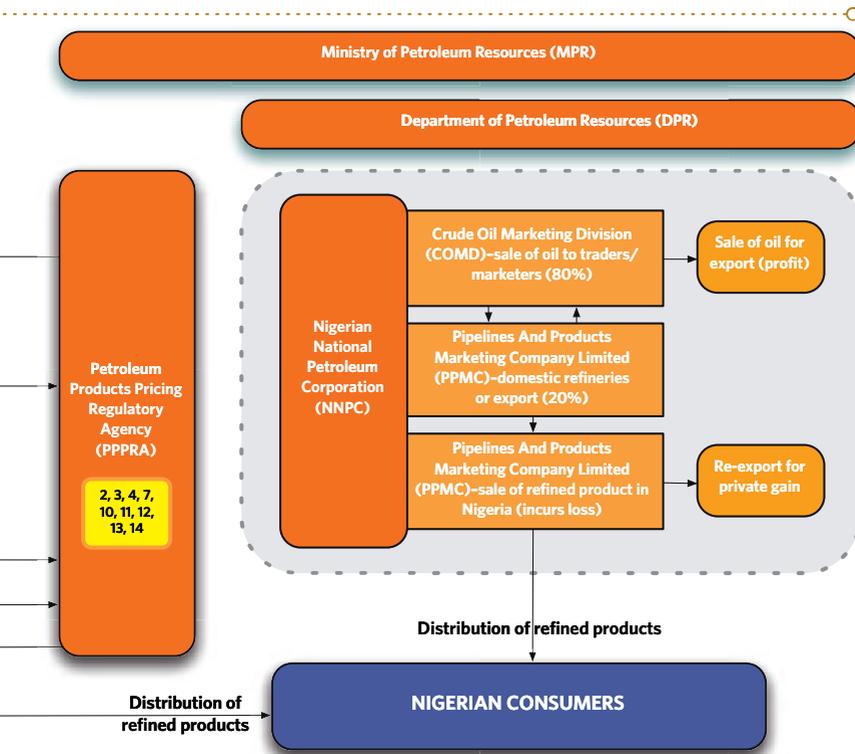
The government and the public are well aware of these problems. A plan has been initiated to gradually transition the electricity sector towards full-cost recovery, while targeting support to the poorest consumer groups. The problem of fuel subsidies, however, is at an impasse. Although plans have been drawn up to deregulate prices, many do not find them credible. There is little public confidence that reform would not open the door to increased opportunities for corruption.

Improving governance and credibility around fuel subsidy reform in Nigeria is fundamental to developing a strategy that can enable change. Parallel to the ongoing efforts to reform the governance of the energy sector, this ought to include: consultative research, to more precisely identify the winners and losers from deregulation; a carefully designed package of economic and social support measures, with features to ensure their credibility and transparency; and a gradual phase-out of subsidies over a fixed time frame, as the administrative structures that can oversee a liberalized energy market develop.

Even if prices are successfully reformed, subsidies will remain a politically popular measure during times of high oil prices or other economic shocks. And politicians will always find it hard to resist policies that deliver easy votes. The Nigerian government will need to establish how it can help the economy and vulnerable households in times of need, without resorting to inefficient subsidies.

Petroleum Support Fund (PSF) – Institutional Linkages (PMS Subsidy Payment Process)





## PMS subsidy payment process - April 2012

<b>Product allocation</b>	<b>1</b>	Oil Marketing Companies (OMCs) submit Expression of Interest (EOI) with supporting documents to the Executive Secretary (ES) of PPPRA (OMCs should be registered with the Corporate Affairs Commission (CAC).
	<b>2</b>	ES reviews and forwards submitted EOIs to PPPRA Operations Unit for verification.
	<b>3</b>	PPPR Operations Unit verifies and forwards application to the legal unit for legal advice.
	<b>4</b>	If satisfied, legal Unit prepares the Contract/Letter of agreement.
	<b>5</b>	Agreement is signed by both the OMC and ES of the PPPRA.
	<b>6</b>	Approved OMC's confirm they are importing three days ahead of cargo arrival in country and furnish the PPPRA with relevant documents such as invoices, bills of lading, etc.
	<b>7</b>	PPPR allocate volumes to OMCs based on previous performance, availability of product, quarterly importation plan and other critical factors deemed appropriate by PPPRA.
<b>Claim verification</b>	<b>8</b>	Vessel cargo discharges at port and is transferred to depot locations approved by DPR and witnessed by PPPRA representative, external auditors and industry consultants.
	<b>9</b>	OMC submits import documents to PPPRA Operations/PSF Unit; all documents must contain a duly signed shore tank report by a PPPRA representative; invoices must be at approved ex-depot prices and volumes.
	<b>10</b>	PPPR Operations Unit reviews the document for completeness.
<b>Calculation process</b>	<b>11</b>	PPPR Petroleum Support Fund (PSF) Unit verifies documents and inputs required parameters into PSF Analyser application software to determine over/under* recovery using the PPPRA Template.
	<b>12</b>	PPPR PSF Unit staff and Unit head review landing costs, over/under recovery calculations to ensure accuracy using verified documents and Platts product prices.
	<b>13</b>	PPPR Committee of Managers reviews and confirms subsidy amounts.
	<b>14</b>	PPPR PSF Unit prepares Sovereign Debt Statement (SDS) stating the subsidy due to the OMCs and an advice detailing the charges the OMC is expected to pay (since March 2010 use of the SDN system was introduced).

<b>Payment process</b>	<b>15</b>	PPPRA PSF Unit notifies OMCs that advice and SDS are ready for collection.
	<b>16</b>	OMC collects advice and pays stated charges and submits a letter of Indemnity to PPPRA PSF Unit.
	<b>17</b>	PPPRA PSF Unit issues SDS to OMCs.
	<b>18</b>	OMC takes SDS to Debt Management Office (DMO).
	<b>19</b>	DMO issues OMCs a Sovereign Debt Note (SDN) (guarantees marketers' payments within 45 days of issuance of SDN).
	<b>20</b>	OMC takes SDN to Central Bank of Nigeria (CBN) for payment (CBN is the custodian of the PSF).
	<b>21</b>	Issuing of Payment Mandate through the Office of the Accountant General (OAGF) of the Federation to the CBN.
	<b>22</b>	On maturity of the SDN, CBN makes payment to the OMC.
	<b>23</b>	Federal Ministry of Finance (FMF) sources funds and coordinates subsidy settlement.
	<b>24</b>	On the 26th of the month PPPRA forwards documents to FMF.
	<b>25</b>	On the 27th–30th of the month FMF forwards documents to external auditors via the Budget Office of the Federation (BOF).
	<b>26</b>	External auditors appointed by FMF verify /audit OMCs subsidy claims.
	<b>27</b>	Submission of audited reports on subsidy claims to FMF by external auditors.
<b>28</b>	FMF reconciles payments to OMCs against the external auditors' report and advises PPPRA accordingly.	

NOTE: With the introduction of the SDN in order to minimize processing time, OMCs were issued with SDN prior to the audit step, resulting in variations in PPPRA subsidy figures and approved federal government auditors reports. This is reconciled with the issuance of a debt note against OMCs found to have claimed in excess of the auditors' findings. The PPPRA ensures the Nigerian government is indemnified against any overpayment to OMCs.

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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)

The GSI is an initiative of the International Institute for Sustainable Development (IISD). Established in 1990, the IISD is a Canadian-based not-for-profit organization with a diverse team of more than 150 people located in more than 30 countries. The GSI is headquartered in Geneva, Switzerland and works with partners located around the world. Its principal funders have included the governments of Denmark, the Netherlands, New Zealand, Norway, Sweden and the United Kingdom. The William and Flora Hewlett Foundation have also contributed to funding GSI research and communications activities.

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### The Center for Public Policy Alternatives (CPPA)

The Center for Public Policy Alternatives (CPPA) is an independent, non-partisan public policy think-tank committed to rigorous research through which public policies and processes are examined, supported and best practices disseminated. The CPPA aims to help sub-Saharan African governments and their agencies realize the goal of rapid development and a prosperous future for their citizens.

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