

Policy Brief: Kerosene Subsidy Reform and the Burden of Supply

Ending Kerosene Pricing and Supply Gaps

To stem the protracted shortages of household kerosene, the Petroleum Products Pricing Regulatory Agency (PPPRA) removed the subsidy on kerosene in January 2016, and deregulated the kerosene market, pushing up the price from ₦50 to ₦83. While the ₦83 per pump price applied only to Nigerian National Petroleum Corporation's (NNPC's) retail outlets, the capacity of independent marketers to import fuel and sell at the official rate is hampered by the lingering foreign exchange (forex) scarcity situation in Nigeria.¹ Forex scarcity challenges have persisted despite the Central Bank of Nigeria's deregulation of the forex market to bridge the widening gap between the official and parallel market rates, and wipe out the arbitrage. The difficulty marketers face in sourcing forex requirements from parallel or autonomous market sources has provided NNPC's subsidiary, the Pipelines and Products Marketing Company (PPMC) with a monopoly on kerosene imports, forcing marketers to either suspend or abandon importation, aggravating scarcity. Consequently, months after the changes in kerosene subsidy policy, kerosene supply challenges remain, as prices soar across major cities in Nigeria.

Power imbalances that traditionally exist on the basis of gender have strong implications on women's capacities to access energy products like kerosene which is predominantly used by the poor and low-income earners for their domestic energy needs. Kerosene subsidy reform can therefore, have positive effects if it leads to improved energy supply systems, increasing energy access to the poor and the vulnerable, especially women living in far-off communities that lack electricity and energy-efficient services.

© Authors: Victoria Ohaeri and Temitope Adeyinka

❖ **Kerosene scarcity worsens...**

"The situation here - at Mushin Lagos - is unbearable because we buy one litre of kerosene at N300. People are now using coal-pot to cook instead of kerosene stove."

Lamentations like this inundated Spaces for Change's (S4C's) July 2016 online survey, which periodically monitors retail prices and the distribution of household kerosene in Nigeria.² Predominantly used by poor and low-income earners for cooking and lighting,

Summary of Proposals

In sum, SPACES FOR CHANGE [S4C] calls on Nigerian Government to:

1. Improve kerosene supply chain efficiency >> create the right investment climate and provide incentives that will enable the participation of more players in kerosene importation, storage and distribution.

2. Circumvent uncertainty of kerosene subsidy reform policies >> present clearer criteria for the operation of the price modulation mechanism and instill greater transparency in managing its over- and under-recoveries.

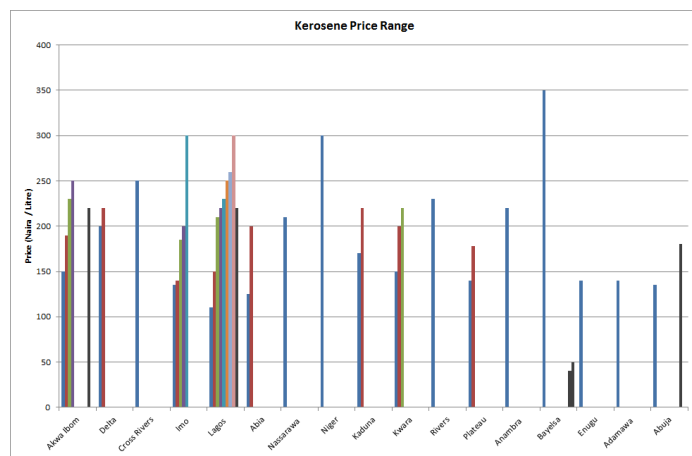
3. Reappraise the deregulation of the kerosene market >> integrate supportive policies to kerosene subsidy reform and strengthen regulatory action.

4. Improve women's welfare by fast-tracking the transition to cleaner cooking fuels >> increase investment, with private sector participation, in the development of alternative energy sources, including renewables, LPG, electricity, and off-grid products.

Power imbalances that traditionally exist on the basis of gender have strong implications on women's capacities to access energy products like kerosene which is predominantly used by the poor and low-income earners for their domestic energy needs.



getting kerosene directly from the pump has, for several years, been an uphill struggle, defying the multiplicity of interventions introduced to stabilize product supply. In particular, the lingering kerosene scarcity reignites concerns about the significance of the recent changes in kerosene subsidy policy.



Columns in Colour:	Prevailing kerosene prices across states
Columns in Dark Grey:	Unofficial vendor

Note: Unofficial vendor prices in Bayelsa are from illegal artisanal refineries

As the above illustrates, S4C's July 2016 survey suggests that the majority of consumers across the country are buying kerosene at an average price of N220, about 180% higher than the official pump price of N83. Out of 45 responses received from end-users in 18 states, including the Federal Capital Territory, the survey revealed that kerosene prices in July in particular, ranged from N120 to N300 per litre or per bottle.³ Retailing kerosene in jerry cans and bottles is commonplace across all parts of the country. Not a single respondent reported paying the official price. The majority of consumers report that they purchase the product from informal vendors, as most filling stations are out of stock. The few respondents who purchased kerosene from filling stations dispensing kerosene paid extortionate prices, with parts of Lagos, Bayelsa and Niger States, recording the highest prices of N300 and above per litre.

The latest reforms are evidently not helping the poorest people in Nigeria. That kerosene - which is mostly used by low-income earners for domestic energy needs - is sold at a cost higher than diesel and petrol, creates a situation of concern, warranting urgent interventions to alleviate the scarcity and bridge gaps in distribution. Solutions designed to end the perennial crisis of kerosene scarcity would be more effective if the deregulation of petroleum sector is fine-tuned by particularly involving more players - depots and marketers - in the supply chain. Beyond broadening the involvement of private depots, Petroleum Products Marketers Association, and other associational vehicles primarily involved in kerosene discharge, storage and distribution operations in the supply chain, achieving self-sufficiency in domestic refining of crude oil is a long term solution that needs to be accorded high priority. This will also reduce the demand for foreign exchange, wipe out importation hassles and improve local refining capacities.

❖ The problems with the kerosene supply chain

The festering gaps in the kerosene distribution chain, leading to the high prices at the retail chain are often attributed to low price of the product. Further aggravating the situation is the challenge of pipeline vandalism, product diversion⁴, adulteration, smuggling⁵, sharp practices by middlemen⁶, and the long chain of handling. Kerosene is sold in neighboring countries like Niger and Cameroun where market prices of kerosene is higher. Up to 20 to 30% of total petroleum consumption in

Niger is smuggled primarily from Nigeria.⁷ Consequently, smuggling flourishes as kerosene is illicitly transported across borders to neighbouring countries because of the huge arbitrage opportunity to reap high profit margins. The multiple use of kerosene for domestic, industrial and aviation purposes is also another major factor compounding the scarcity situation.

Faced with rapid population growth and a corresponding increase in local energy demand, Nigeria's low refining capacity⁸ necessitated the importation of another, higher grade of kerosene called the Dual Purpose Kerosene (DPK). A higher quality fuel, it is used for multiple purposes, including for aviation use. The diversion of DPK imports for aviation use is well-documented.⁹ DPK also and blends well with other fuels, especially diesel. Studies have shown that that it is not uncommon for marketers to blend kerosene with diesel to increase their profit margins.¹⁰ The worsening aviation (jet) fuel scarcity disrupting airline operations between June and July 2016 ostensibly puts additional pressure on DPK imports, restricting the quantity available for domestic consumers.

The very protracted handling chain is another obstacle to the stability of kerosene supply and distribution, leading to high prices at the retail end. As Reginald Stanley, a former head of the PPPRA once explained: "a typical kerosene transaction starts from the discharge into marketer's tanker on the shore[...] The marketer in turn sells the product in trucks; the big truck transfers into peddling trucks that are 10,000 litres capacity. These peddling trucks move the product to road side tanks and from the road side tanks, the product is sold to jerry can retailers and ultimately to bottle retailers.[...] Most people in rural areas can only buy this product in bottles, which is the sixth handling point. No other white product goes through this type of value chain."¹¹ Leakages take place throughout this complex handling chain. The excerpt above reveals that the amount of kerosene that eventually gets to the real domestic market, down to the retail end, is limited.

❖ Is kerosene subsidy reform not working?

Just as the distribution and supply challenges persist, kerosene subsidies seem to have continued. A March 2016 review of pricing templates of the Petroleum Products Pricing Regulatory Agency (PPPRA), which was based on Platts' average prices, showed that the Nigerian Government resumed the payment of a subsidy on kerosene in the sum of N1.17 per litre. The recommencement of subsidy payment contrasts with the PPPRA's January 2016 adjustment to the kerosene pricing template, which showed zero subsidy on the product. Explaining this contrast, the Nigerian government, through the Minister of State for Petroleum Resources, Dr. Ibe Kachikwu, contends that the subsidy regime on kerosene was never terminated, but rather, "what the government did was to modulate the prices of the commodities based on the fall in crude oil price in the international market."¹² Reechoing this sentiment, PPPRA's Acting Executive Secretary, Sotonye Iyoyo, has said that what still exists is price modulation policy, through which it considers and reviews pump price of the PMS quarterly.¹³

SPACES FOR CHANGE finds that although the PPPRA template shows an under-recovery of N1.17 per litre, thus implying a subsidy payment, the subsidy is actually not paid by the government. What the government has done with the price modulation framework is to save funds from under-recovery when oil prices were very low earlier in the year and then utilize the savings to offset the over-recovery (implied subsidy on PPPRA template) when oil prices started going upwards again. The PPPRA has not yet responded to SPACES FOR CHANGE's freedom of information (FOI) request for the details of the savings from under-recovery from petroleum products. This means that the amount of savings officially available to offset the over-recovery is unknown.



❖ *Has kerosene subsidy been removed or retained?*

We answer this question in both the affirmative and the negative, and this uncertainty appears to be a political one. For the YES answer, you would recall that Nigeria's President Muhammadu Buhari, has always maintained a pro-subsidy stance. However, economic realities at this time – such as reduced revenue, forex scarcity and the associated fuel scarcity – cannot support subsidy payments, which may have forced a change in disposition towards subsidy removal. Not only that, the unpopularity of the subsidy removal policy provides an incentive for officials to publicly dissociate from its validation. Price modulation, however, represents a technical language or euphemism for subsidy removal, and avoiding the public opprobrium that energy subsidy cuts often generate. Furthermore, there is no appropriation for subsidy in the 2016 budget, highlighting the government's readiness to end the subsidy regime.

On the other hand, that is for the NO answer, kerosene subsidy has in a way, been retained by the government. This is because, the price modulation allows government do away with subsidy for now when international oil prices are low, enabling them to easily adjust domestic product prices to reflect small changes in international oil prices. Another dimension to this scenario analysis is to project what will happen if oil prices rise significantly in the immediate future to, let's say US\$100. Our expectation is that subsidy might reappear—but at what price, it is hard to tell. In other words, the Nigerian government might reinstate subsidy, and that is where the major uncertainty lies. And in the meantime, it will be very hard to tell exactly how much money the government is saving or losing—not without full transparency on the under- and over-recoveries of PPPRA on a monthly basis.

Shifting policies of government could lead to uncertainty, exposing investments in the sector to both legal and economic risks. In June 2016, Dr. Kachikwu announced that Nigeria has signed a global US\$8.5 billion potential investment deal with a Chinese company, NORINCO, in the upstream business in Nigeria. At a time when Nigeria is looking toward China to raise about US\$50 billion to bridge the infrastructure gap in her upstream, midstream and downstream petroleum sectors, policy uncertainty, if unresolved, could have a negative effect on the country's potential to attract foreign investments. Studies show that investors delay investing until the political or policy uncertainty of reform is resolved. Baker, Bloom, and Davis (2013) find evidence consistent with the hypothesis that an abnormally high level of policy uncertainty is responsible for a significant amount of unemployment and slow growth.¹⁴

❖ *Removing subsidy on kerosene is not enough*

What is evident from the ongoing kerosene crisis is that removing the subsidy alone, without complementary policies, is insufficient to address the gaps in product supply. Nigeria's subsidy bills rose exponentially as policy and regulatory uncertainties foiled official attempts to remove the kerosene subsidy through a presidential directive in 2009. By the end of 2013, records showed that the Federal Government, through the NNPC, spent ₦634 billion to subsidize the retail price of kerosene in three years (2010-2012)¹⁵. During this period, NNPC supplied 2,515,582.44 metric tonnes of DPK in 2010; 1,922,263.56 metric tonnes in 2011; 2,622,843.20 metric tonnes in 2012, and in 2013, NNPC supplied 2,671,747.97 metric tonnes making a total of 9,732,437.17 metric tonnes.¹⁶

The Nigerian Senate has noted that the kerosene subsidy amount is "more than double of the aggregate annual budget for education, health, roads, security and agricultural sectors" and only less "than 10 per cent of Nigerians benefit from this heartless massive scheme that drains the nation's treasury."¹⁷ More concerning is that Nigeria's subsidies on kerosene do not necessarily lead to lower prices, therefore, taking the benefits the subsidies farther beyond the reach of the poor it intended to target. Rather, kerosene subsidies have compounded problems of diversion and product adulteration.

While removing the subsidy was therefore necessary to reduce the fiscal burden of fuel subsidy on the government deficit, it is equally glaring that subsidy reform, without governance strengthening, without the piloting of energy efficiency schemes and energy alternatives and without promoting an enabling environment for private sector participation in energy sector development, is a journey towards ineffectuality. The demand for kerosene continues to exceed supply, especially as Nigeria's four refineries function below the refining capacity required to meet local demand for petroleum products. Governance strengthening means concertedly taking steps to reduce importation through improvements in local refining—as well as enabling third-party companies to supply fuel throughout the country, but with consumer protection measures taken to ensure that the prices people pay are fair.

❖ *Distributional impacts of kerosene subsidy reform need to be understood*

Because women are the ones predominantly seen at filling stations, queueing for many hours to purchase the kerosene or forced to resort to firewood and traditional biomass to cook, we can safely hypothesize that women are primary users of kerosene. As such, they stand the most to lose if subsidy reform simply leads to higher prices and the same bad quality of supply: this will either reduce their incomes or see them, again, turn to traditional biomass fuels. The health burden associated with using traditional fuels falls heavily on women and their children. The World Health Organization (WHO) finds that indoor smoke is one of the underlying causes and to blame for nearly 800 000 child deaths annually, with more than one third, that is 358 000 deaths, occurring on the African continent.¹⁸ Newborns and infants are particularly vulnerable to smoke-induced child deaths because they often carried on their mother's back while she is cooking. This grim statistic makes it quite imperative that kerosene is either affordable or available—or it is substituted with cleaner fuels or cooking technologies, such as liquefied petroleum gas (LPG) and clean cook stoves.

Little is known about the extent to which the existing kerosene subsidies affect women, nor how women would be affected by various possible reform plans. However, there is evidence that absence of measures to absorb shocks, or lessen the disproportionate impacts of reform, could reduce the benefits that

women currently receive, and threaten the already fragile prospects for supply stability. Because of the formidable challenges of inflation and exchange rate fluctuation posed by reforms, a strong social protection and mitigation program designed after a thorough understanding of the household distributional impacts on different segments of the population is necessary, in order to identify the hardest-hit sectors and groups—like women—with a higher degree of dependence on subsidized fuel.

❖ *Scarcity and high prices increase resistance to cleaner fuel alternatives*

As the quote above demonstrates, consumers are already switching to cheaper alternatives, including biomass, coal, sawdust and firewood. Put differently, for millions of consumers of HHK, especially women whose traditional use of energy revolves around domestic chores like cooking, the lingering shortages as well as the increasing price of kerosene push them to resist cleaner fuels, with the attendant implications on maternal wellbeing, deforestation and environmental degradation. While smaller sizes have been introduced more recently, LPG cylinders have historically been available in 12.5 kg sizes. LPG currently sells in the domestic market at an all-time high price of N4,000 from the initial price of N2, 300 for 12.5kg cylinder size.¹⁹ Taking the prevailing income inequalities into account, a high LPG price has implications for gender. For instance, women in low-income households may be unable to switch to cleaner fuels like LPG because it requires an upfront capital cost and continued high expenditure on refilling.

According to the World Economic Outlook's 2015 Electricity Access Database, 96 million people, translating to 45% of the country's 170 million population lack access to electricity.²⁰ Attacks on gas installations are continuing to complicate gas supply constraints and infrastructure deficits, which has seen electricity generation drop to 2,524 megawatts (mw) in July 2016 from about 5,500mw of power in February 2016.²¹ Because energy alternatives are expensive, unaffordable to the poor, kerosene dependence is one of the very few options available to them. That is why kerosene consumption is on the increase in Nigeria at a time when advances in technology are helping to expand access to modern energy services elsewhere.

❖ *It's time to target a shift to a more efficient subsidy system*

It is not clear if the government will attempt to reinstate a complete deregulation of the sector, or target a shift to a more efficient subsidy system, particularly towards cleaner alternative household cooking fuels, such as LPG and other renewables. As has been emphasized, subsidy reform can have positive effects if it leads to improved energy supply systems, increasing energy access to the poor and the vulnerable, especially women, in communities far-flung from distribution networks that lack access to electricity and energy-efficient services. Policy designers should recognize that inequalities are exacerbated when gender-based differences are ignored. With a shift from traditional fuels such as biomass through to transitional fuels - such as kerosene - and modern fuels - such as electricity - women reduce the time spent on collecting biomass and also gain access to more efficient fuels and possibly labour saving appliances.

Beyond targeting women specifically, deliberate policy measures are needed to remove the barriers and disadvantages women face in gaining access to credit, new technologies, and marketing networks for energy products and services. As primary users of biomass energy and traditional cooking fuels some of which are often hazardous to human health, women's input, expertise and perspectives are critical to the execution of innovative energy investments that have great potentials to redistribute wealth, transfer technology and expand access to cleaner fuel alternatives. The availability of alternative cleaner fuels not only lessens the adverse impacts of electricity shortages on vulnerable segments of the population, but is also necessary for the substantially reducing global greenhouse gas emissions.

1. Udeme Clement, Major marketers lament non-supply of kerosene, Vanguard, July 22, 2016 <http://www.vanguardngr.com/2016/07/major-marketers-lament-non-supply-kerosene/>
2. S4C's periodic online survey conducted between May – July 2016 generated 45 responses from kerosene users in 18 States including the Federal Capital Territory. There were multiple responses from States like Lagos, (South West Nigeria), Akwa Ibom (South-South Nigeria), Imo and Abia States (South East Nigeria), Kwara and Niger States (North Central Nigeria).
3. Retailing kerosene, by unofficial vendors, in bottles or gallons is very commonplace across all parts of the country. In Lagos, it is predominantly sold in 60cl Star bottle at N150 or 75cl Eva water bottle at N180 (Badia Community, Lagos)
4. NNPC Press Release: [Why kerosene sells above official price – NNPC](#)
5. Evan Mills, Lifting the Darkness on the Price of Light: Assessing the Effect of Fuel Subsidies in the Off-Grid Lighting Market, United Nations Environmental Programme, (UNEP), December 2014, p.18.
6. NNPC Press Release: [Why kerosene sells above official price – NNPC](#)
7. Evans Mills, *ibid*, p.15.
8. NNPC's four refineries have a combined installed capacity of 445,000 bpd. See [NNPC'S Refineries and Petrochemicals](#)
9. Evans Mills, *ibid*, p.15.
10. See Yekini Olawaiye Lawal (PhD.), Kerosene Adulteration in Nigeria: Causes and Effects, American Journal of Social and Management Sciences ISSN Print: 2156-1540, ISSN Online: 2151-1559, doi:10.5251/ajms.2011.2.4.371.376, p.372.
11. The Challenges in the Kerosene Value Chain – Stanley, [Reported in Vanguard, December 3, 2013](#): <http://www.vanguardngr.com/2013/12/challenges-kerosene-value-chain-stanley/>
12. Okechukwu Nnodim, Subsidy on Kerosene Returns, Punch Newspapers, <http://punchng.com/subsidy-on-kerosene-returns/>
13. Michael Eboh, No going back on subsidy removal – FG, April 5, 2016, Read more at: <http://www.vanguardngr.com/2016/04/no-going-back-subsidy-removal-fg/>
14. Baker, Scott R., Nicholas Bloom, and Steven J. Davis. 2013. "Measuring Economic Policy Uncertainty." Quoted in Brandon Julio and Youngsuk Yuk, Policy Uncertainty, Irreversibility, and Cross-Border Flows of Capital, p.7.
15. Investigations by House of Representatives Committee on Petroleum (Downstream) led by Hon. Dakuku Peterside. See also Kunle Kalejaiye, Vanguard News, *FG Spends N634bn on Kerosene Subsidy*, November 1, 2013, <http://www.vanguardngr.com/2013/11/fg-spends-n634bn-kerosene-subsidy/>
16. NNPC Press Release: [Why kerosene sells above official price – NNPC](#)
17. 2014 Lead debate paper in support of a motion in the Nigerian Senate sponsored by Senator Babajide Omowore (Osun East), titled: 'Urgent Need to Stop N700 million a day Illegal Kerosene Subsidy'. See also: Onyedi Ojiabo, *Senators Oppose N700m Daily Withdrawal for Kerosene Subsidy*, February 21, 2014, <http://thenationonline.net/senators-oppose-n700m-daily-withdrawal-for-kerosene-subsidy/>
18. World Health Organization, *Fuel for Life: Household Energy and Health*, 2006, p.21.
19. xvix. Oxford Business Group Nigeria Report 2013, page 126:
20. IEA, World Economic Outlook's 2015 Electricity Access Database 2015, Accessed July 24, 2016: <http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/>
21. Daily generation report released by the Transmission Company of Nigeria (TCN) on July 1, 2016, reported in *Nigeria Electricity Hub, Nigeria's Electricity Generation Drops to 2,524MW, July 2, 2016*: <http://www.nigeriaelectricityhub.com/?p=7893>



This policy brief is produced under the auspices of the organization's *Policing the Nigerian Oil Policy Program* and the [on-going research project on fossil-fuel subsidies and gender](#), with support from [Global Subsidies Initiative \(GSI\)](#) and [Energia](#).

For questions, comments and feedback, please contact:

Spaces for Change, Nigeria [S4C]

Office Address: 7 Independence Street, 1st Floor, Anifowoshe, Ikeja, Lagos, Nigeria

Email: info@spacesforchange.org
spacesforchange.s4c@gmail.com

Website: www.spacesforchange.org

Twitter: @spaces4change

Telephone: 09094539638 | 07036202074