

THE TRUTH ABOUT COOKING: A LOOK AT THE NIGERIAN LPG MARKET

Nigeria LPG Market Analysis Report
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DISCUSSION FLOW

- About Truth about Cooking (TAC)
- TAC Immersion Process to Implementation
- TAC LPG Stakeholder/Supplier facing insights driven immersion
- TAC Nigeria LPG Market Analysis objectives and approach
- Stakeholder Mapping and Engagement
- Market Analysis Sources
- The Nigeria LPG market
- Current Nigeria LPG market industry/market overview
- Plans for growth and potential opportunity for Nigeria LPG market
- Stakeholder insights: discussions, secondary research and surveys
- Nigeria LPG Market Analysis according to LPG Stakeholders
- Summarized insights about LPG market in Nigeria to be channeled into TAC campaign.
- Conclusion: Opportunities to positively impact LPG uptake in Nigeria beyond TAC campaign
- Sources and Appreciation

THE TRUTH ABOUT COOKING



GLOBAL ALLIANCE FOR
CLEAN COOKSTOVES

STB McCANN

McCANN
GLOBAL HEALTH



DRIVING DEMAND FOR CLEAN COOKING

- Unique Approach- Commercial Marketing and Advertising Agency and local BCC and community engagement Nigerian NGO with 40 years of local experience collaborating with in country stakeholders
- Unbranded commercial market shaping, behavior change communication (BCC) campaign in Lagos and Abuja
- Promote the switch from dirty cooking fuels (kerosene or firewood/charcoal) to LPG
- Stimulating increased demand for LPG cook stoves and fuel in households in Nigeria
- Complements NLPGA efforts and supports mandate

CORE OBJECTIVES

A person is shown in a kitchen setting, pouring liquid from a white pitcher into a pan on a gas stove. There are several other pots and pans on the stove, and steam is rising from them. The background is slightly blurred, showing a window and some kitchen items. The overall scene is dimly lit, with a teal overlay.

1 Increase the percentage of populace in Lagos and Abuja who are aware of LPG cook stoves and fuels

2 Increase the correct and consistent adoption (acceptability) of LPG cook stoves and fuels in Lagos and Abuja

3 Demonstrate the effectiveness of scalable Market Shaping communications in the Nigeria cook stoves sector

TAC NIGERIA LPG MARKET ANALYSIS OBJECTIVES AND APPROACH

- Summarize LPG market and industry informed by stakeholder input and desk research.
- Build on existing knowledge around barriers to LPG adoption for seamless immersion and campaign co-creation.
- Learn from stakeholder impressions of strategic and tactical approaches to LPG marketing and promotion in Nigeria.
- Review stakeholder insights generated from discussions, interviews and desk research.
- Develop a preliminary mapping of geographies in Lagos and Abuja that may be more receptive to LPG uptake and TAC market shaping campaign.
- Utilize market analysis in the design and execution of the 5scs workshop and market strategy development

STAKEHOLDER MAPPING AND ENGAGEMENT

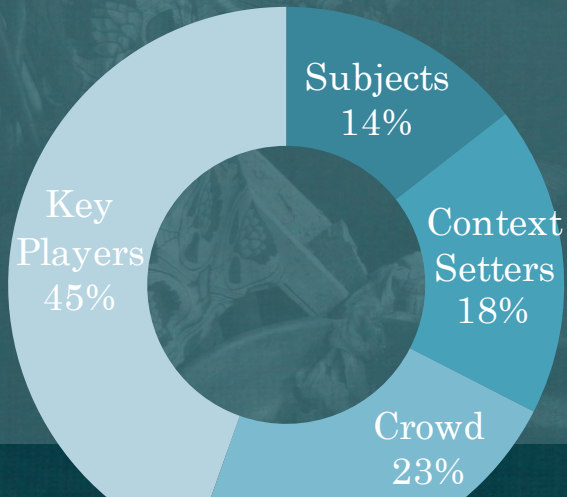
INITIAL STAKEHOLDER MAPPING-DEC, 2016

- 80 people from 60 organizations
- List developed by Africare based on local relationships and connections.

STAKEHOLDER CHARACTERISTICS-DEC, 2016

- 24 representatives from 14 organizations
- 10 organizations were key players
- Remaining 4 have low influence but high knowledge and networks
- Mapping categorization and stakeholder engagement approach to be refined dividing key players into “Key” and “Super Key” players.
- Of the 10 meetings held 5 (50%) were super key-Oando, Total, Navgas, NLPGA and Ministry of Petroleum Resources.
- Opportunity to create advocates among super key stakeholders

STAKEHOLDER MAPPING



STAKEHOLDER MAPPING AND ENGAGEMENT

ONGOING STAKEHOLDER ENGAGEMENT PLANS

- Refine stakeholder list to streamline key and super key players.
- Revisit engaged super key stakeholders
- Visit and engage additional 5 to 10 super key stakeholders
- Engage about 5 to 10 key stakeholders/context setters not reached yet at national and local levels (national and state Governments and Ministries)
- Update stakeholder engagement and communications plan
- Develop workplan for 2017 and activate in January 2017.
- Key Organizations Engaged in Dec, 2016

NLPGA	Super Key Stakeholder
Oando	Super Key Stakeholder
NLNG	Super Key Stakeholder
Navgas	Super Key Stakeholder
Min. of Petroleum Resources	Super Key Stakeholder
Total	Key Stakeholder
GACC	Key Stakeholder
NNPC Retail	Key Stakeholder
Techno Oil	Key Stakeholder
Gas Terminalling	Key Stakeholder

MARKET ANALYSIS SOURCES

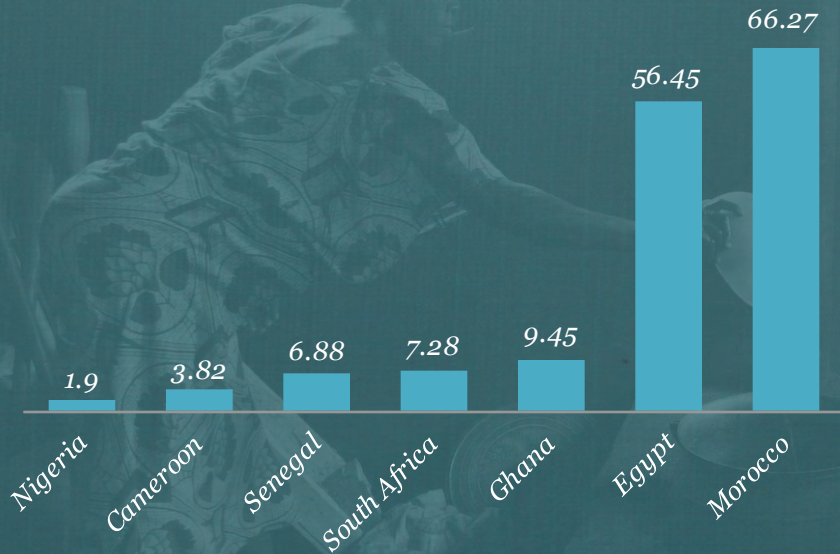
- Reviewed Africare generated initial LPG stakeholder database (not mapped) in mid 2016
- Attended three key stakeholder meetings (NACC, NLPGA and Ministry of Petroleum Resources) engaging several Nigeria LPG stakeholders in Dec. 2016
- Updated original stakeholder database with Nigeria LPG stakeholder mapping list of 80 individuals from 60 organizations (continuous process)
- Conducted independent secondary research and received additional secondary LPG in Nigeria material from key stakeholders
- Developed interactive survey questions (~35) tailored to current LPG industry 4A framework for easy information sharing
- Held discussions with 24 representatives (interviewed 13) from 14 organizations in Lagos and Abuja over 4 weeks. Ongoing process to continue in coming months.

A person is seated at a table, surrounded by several large pots and bowls, suggesting a food preparation or cooking activity. The scene is dimly lit, with a strong blue-green tint. The person is wearing a patterned garment. The overall atmosphere is quiet and focused.

STAKEHOLDER SECONDARY RESEARCH FINDINGS

LPG IN NIGERIA

PER CAPITA LPG CONSUMPTION IN SELECTED AFRICAN COUNTRIES 2014 (KG)



- Only 17% of LPG produced in Nigeria was consumed by the domestic market in 2016. Over 80% is exported
- Over 80% of 36 million Nigerian HHs cook with kerosene and wood
- High potential for increased adoption due to Nigeria's demographic profile and heavy consumption of other fuels (1.5bn liters of kerosene in 2015 and 95.76mn tonnes of firewood in 2015)
- Nigeria is a major producer of LPG in Africa. LPG adoption low compared to African countries.
- 26k tonnes in 2010 to 126k tonnes in 2013 and 250k tonnes in 2015.
- Domestic LPG demand is expected to reach 1.7million tonnes in 2020 if Nigeria's growth mirrors the Indonesian growth rate...

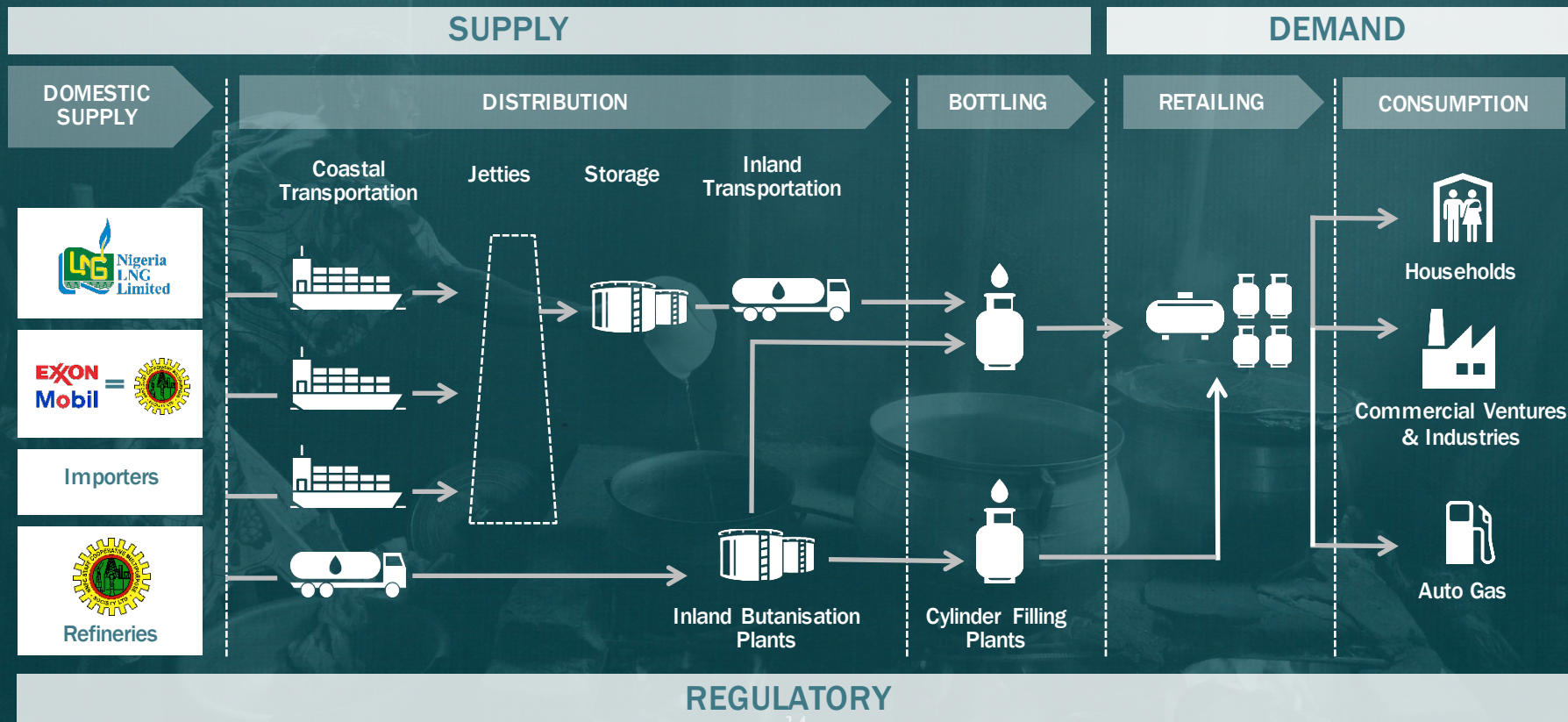
A DECADE OF GROWTH IN NIGERIA LPG SUPPLY



Source: Domestic LPG Growth Prospects: Findings from the NLNG Market Study

CURRENT NIGERIA LPG MARKET VALUE CHAIN

Source: Nigeria LPG Stakeholders Workshop: Domestic LPG Expansion Initiative



A person is shown in a kitchen, pouring liquid from a white pitcher into a pot on a stove. The scene is dimly lit, with a teal overlay. The person is wearing a patterned shirt. There are several other pots and pans on the stove and counter.

STAKEHOLDER DISCUSSION INSIGHTS

STAKEHOLDER INSIGHTS 1: NIGERIA LPG MARKET INDUSTRY SNAPSHOT

- Deregulated and increasingly fragmented lower in the value chain (closer to the consumer)
- Increased Participation – Growth of New Entrants & Plants with number of off-takers increased from 6 to over 20
- Major marketers are Oando, Ultimate Gas, Gasland, Second Coven, Total, NNPC Retail and Techno Oil.
- Coastal storage (concentrated in Apapa, Lagos) represents 74% of available LPG storage capacity while inland is 26%. Overburdened capacity compounded by increase in off-takers resulting in occasional delays and shortage
- Limited bottling plants in the North. Operators situate bottling plants in the South & truck filled cylinders for easier distribution in smaller units to the hinterlands.

STAKEHOLDER INSIGHTS 2: NIGERIA LPG MARKET INDUSTRY SNAPSHOT

- Proliferation of non-compliant skid plants & weak enforcement of existing regulations. ~ 80% of skid plants below operational & safety standards.
- Trucking as only inland transportation mode results in high transportation and retail prices.
- Inconsistent safety checks on cylinders in circulation; insufficient number of facilities for cylinder revalidation and re-certification.
- Insufficient number of retail outlets. Over 2,000 registered LPG retail outlets, but 15,000 operating retailers. 30% to 40% of distribution through unregulated street sellers described as “necessary evil” to get product to substantial number of end users. Very fragmented segment, difficult to regulate, weak enforcement of existing regulations. Limited knowledge of LPG handling & safety practices e.g. decanting.

STAKEHOLDER INSIGHTS 3: PLANS FOR LPG DEMAND GROWTH IN NIGERIA

- Establishment of LPG Council in new LPG policy, which is a multi-stakeholder group led by the Vice - President will be established to serve as an interface body between all the agencies of government and other stakeholders in respect of policy issues relating to the LPG sector.
- Key mandate includes Government plan to improve LPG awareness & acceptability anchored by collaborative stakeholder efforts to educate consumers on economic, health and environmental benefits of LPG – awareness campaigns on safety in LPG use.
- NLNG commitment to industry growth by ensuring reliable and affordable supply
- Dangote is presently constructing a refinery expected to generate LPG as a by-product.
- The overall goal of the current policy on LPG is to promote its wider use in Domestic, Power generation, Autogas and industrial applications towards the attainment of Five Million (5,000,000) MT utilization in 5 years.

STAKEHOLDER INSIGHTS 4: 4A APPROACH

2014 draft national policy on LPG identified 4As as key areas to LPG adoption in Nigeria

AVAILABILITY

Ensure product availability at all times, across the value chain (supply infrastructure, etc.)

ACCEPTABILITY

Encourage acceptability across various socioeconomic classes and geographies (awareness campaigns, etc.)

AFFORDABILITY

Promote affordability, particularly for the mass market (LPG conversion schemes, expand retail space, etc.)

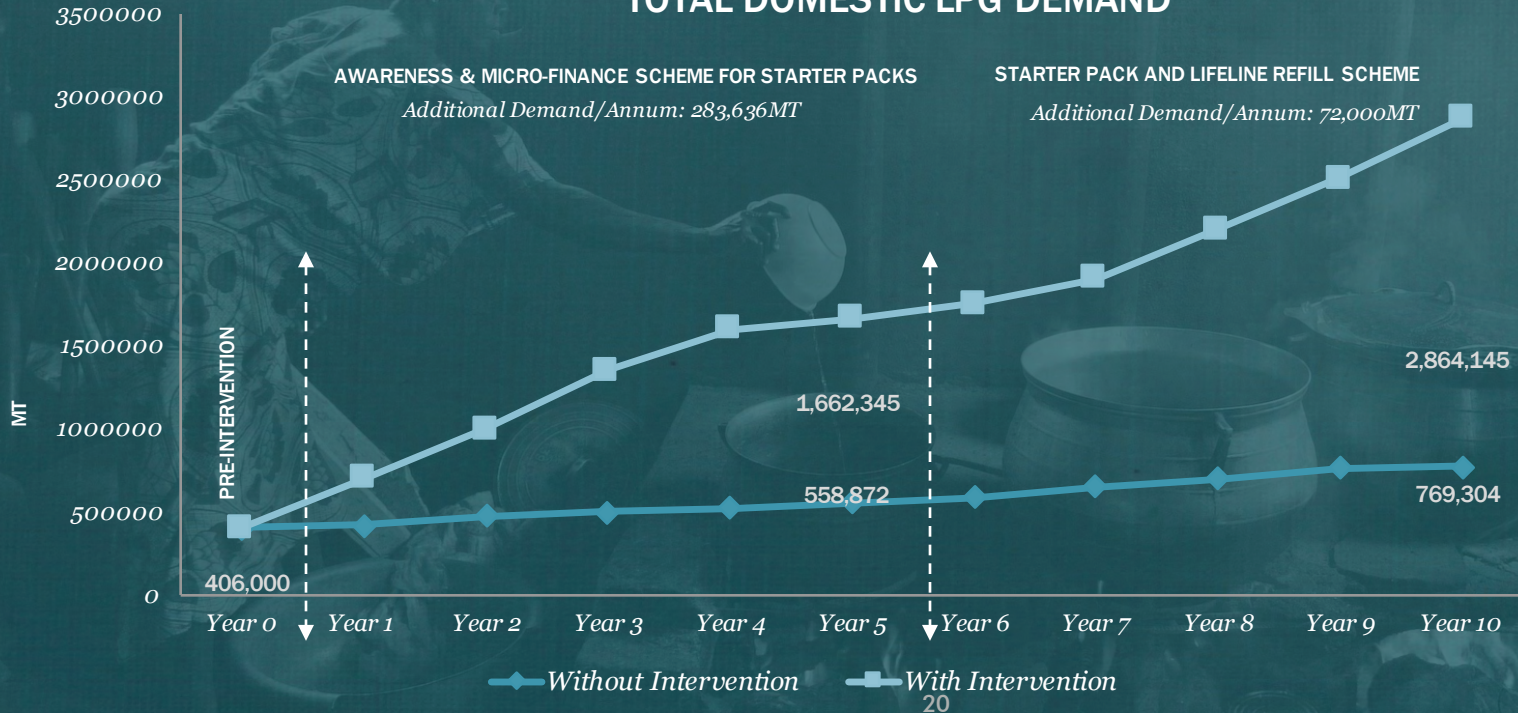
ACCESSIBILITY

Promote accessibility in all areas: urban, semi-urban, and rural

STAKEHOLDER INSIGHTS 5: FORECASTED LPG DEMAND

Goal to convert an initial 4 million households to use LPG as cooking fuel within 2 years, 10 million households over 5 years

TOTAL DOMESTIC LPG DEMAND



Domestic demand could grow by 700% in ten years

Source: Federal Ministry of Petroleum Resources:
Nigeria Domestic LPG Expansion Implementation Plan:
Domestic LPG Inter-Ministerial Committee-Domestic LPG Growth

SUMMARY OF FINDINGS FROM LPG STAKEHOLDER SURVEYS

Note that these are preliminary stakeholder (subset) perceptions and resulting conclusions that inform the campaign may change once we have concluded the market research, media channel, analysis and other 5c's work.

SUMMARY OF FINDINGS FROM LPG STAKEHOLDER SURVEYS

- Key drivers influencing LPG uptake in Nigeria are seen through 4A lens.
- Ranking of 4As show availability and acceptability/awareness as priority. Significant investments have been made in the latter indicating that TAC campaign timing is well aligned with current industry need.
- Lagos and Abuja have higher 4A levels than national average but also represent significant growth areas. Lagos more so than Abuja which should be factored into campaign planning
- Top LPG acceptability barriers in Lagos and Abuja are safety fear, poor consumer knowledge and cultural habits/taste perception
- Top LPG availability challenge in Lagos/Abuja is distribution infrastructure/network. LPG accessibility challenge mirrors this.
- Switching cost, cost of cylinder and transfer of supplier costs adversely impact affordability.
- Radio, TV are viable LPG promotion platforms. Scale is key.
- Current LPG strategic and tactical marketing approaches can be optimized to more effectively drive LPG uptake in Lagos and Abuja.
- There is high correlation between high levels of 4As in different Lagos and Abuja geographies indicating assumptions of market linearity

OVERALL 4A RANKING

Stakeholders were asked to rank the 4A's by importance.

- Availability and Acceptability/Awareness ranked highest.
- Engaged Stakeholder ranking of 4A impact on LPG adoption in Lagos and Abuja.
- Absolute look and weighted look have similar results.

WEIGHTING METHOD

Rank	1st	2nd	3rd	4th
Weighted Score	4	3	2	1

UNWEIGHT RANKING

Top Rank Frequency	
LPG Availability	7
LPG Acceptability/ Awareness	5
LPG Affordability	2
LPG Accessibility	0

WEIGHTED RANKING

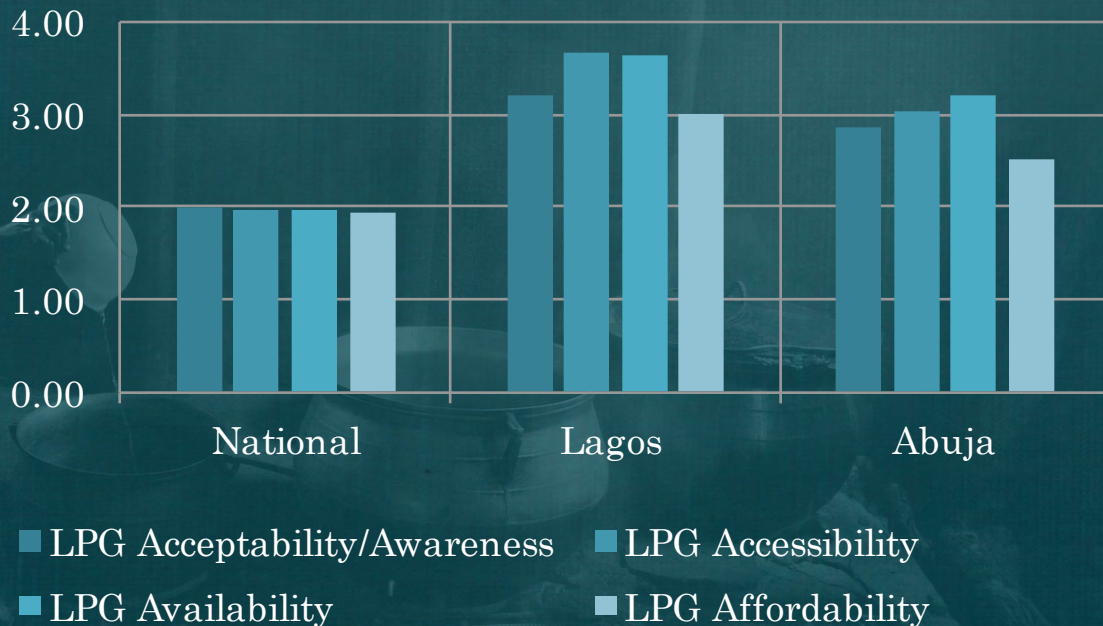
Weighted Score (out of 56)	
LPG Acceptability/ Awareness	40
LPG Availability	37
LPG Affordability	32
LPG Accessibility	21

SUMMARY OF FINDINGS FROM LPG STAKEHOLDER SURVEYS

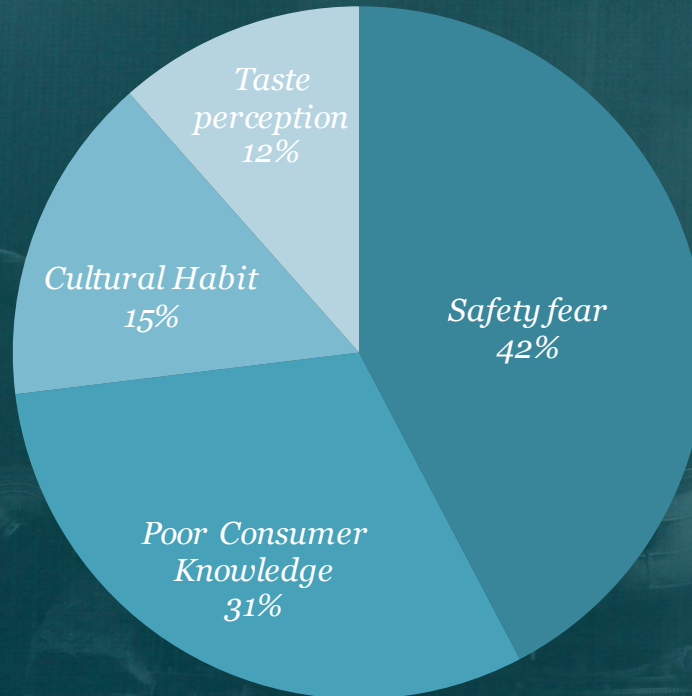
Lagos due to proximity to distribution, population, educations and income levels ranks higher on all 4A compared to Abuja

Abuja is significantly above the national average due to Government presence, growing population, education and income levels

National/Lagos/Abuja LPG 4A levels

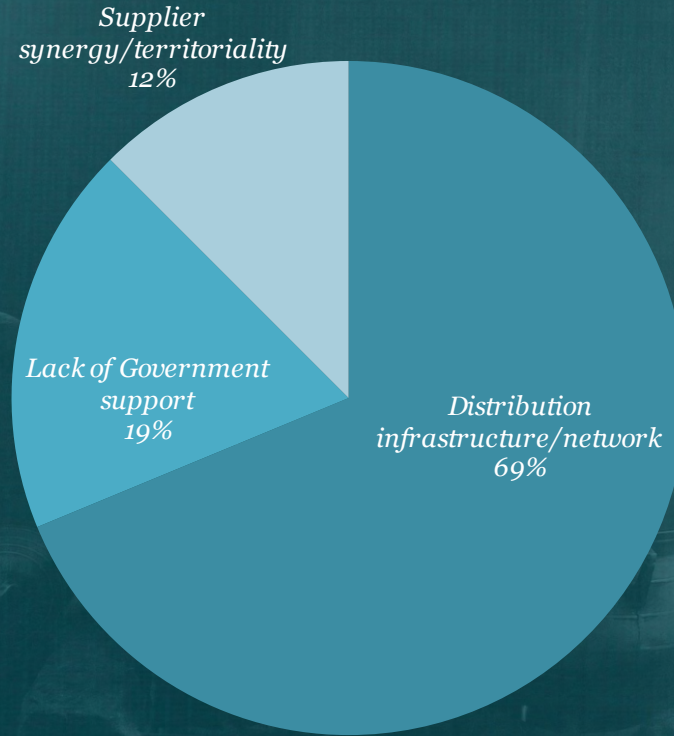


STAKEHOLDER PERCEPTION: LPG ACCEPTABILITY/AWARENESS BARRIERS



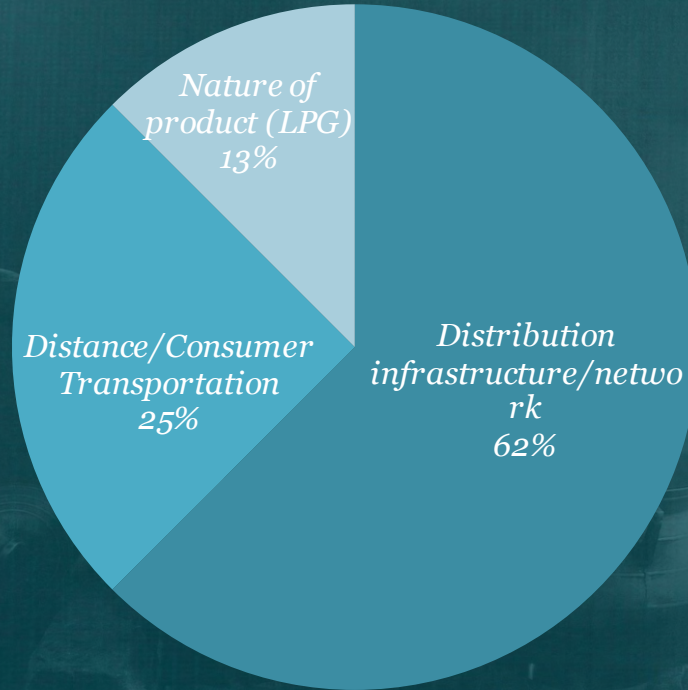
Barriers
mentioned most by
stakeholders

STAKEHOLDER PERCEPTION: LPG AVAILABILITY BARRIERS



Barriers
mentioned the
most by
stakeholders

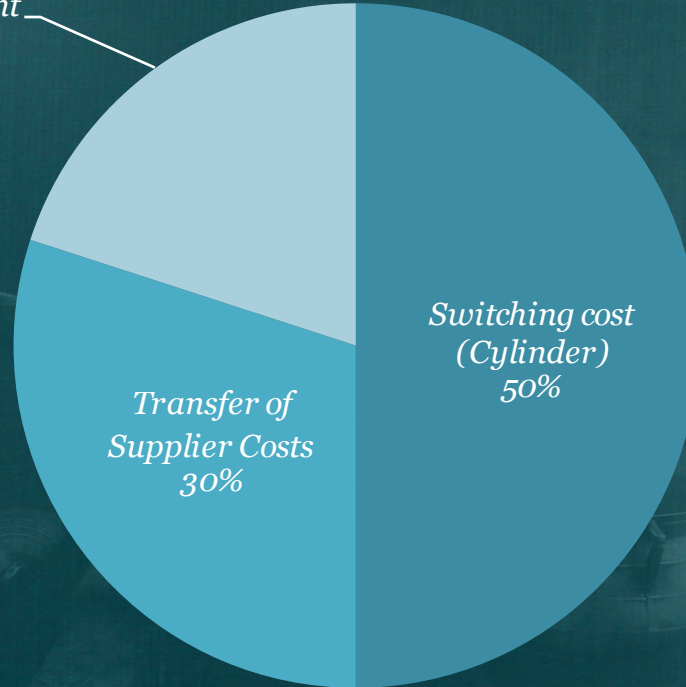
STAKEHOLDER PERCEPTION: TOP LPG ACCESSIBILITY BARRIERS



Barriers
mentioned the
most by
stakeholders

STAKEHOLDER PERCEPTION: TOP LPG AFFORDABILITY BARRIERS

*Lack of Government
Support Through
Incentives and
Subsidies
20%*



*Switching cost
(Cylinder)
50%*

*Transfer of
Supplier Costs
30%*

Barriers
mentioned the
most by
stakeholders

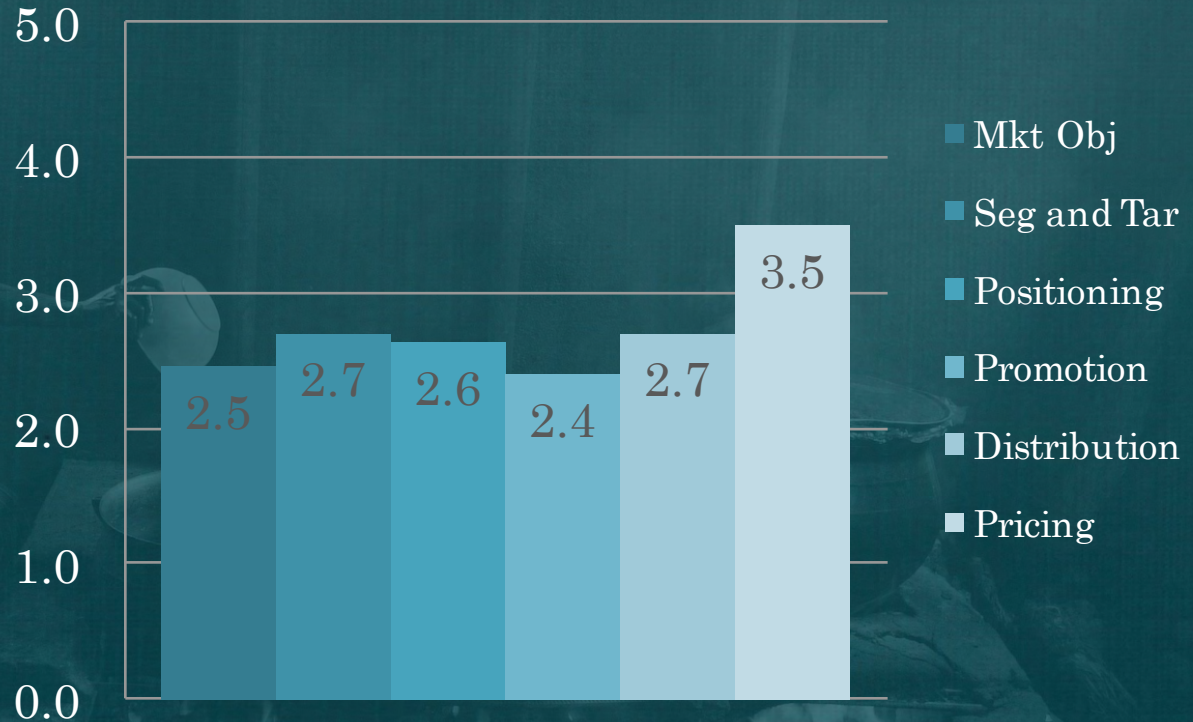
LPG MARKETING STRATEGY AND TACTICS ASSESSMENT

Engaged stakeholder perceptions of effectiveness of LPG operator market strategies and tactics.

Pricing ranked the highest

Segmentation and Distribution a little above average

Clear marketing objectives, promotion approaches and positioning average or a little below



**STAKEHOLDER SURVEY
FEEDBACK ON 4A LEVELS
IN LAGOS LOCAL
GOVERNMENT AREAS AND
ABUJA AREA COUNCILS**

STAKEHOLDER FEEDBACK

LAGOS AND ABUJA LGA AND AC ADOPTION

- Qualitative research on stakeholder views based on 4as
- Informed by stakeholder opinions and guess work.
- Minimal reference to sales and market penetration data
- Stakeholders appeared more knowledgeable about Lagos than Abuja
- Less urban areas had fewer and less certain responses.
- Stakeholders expressed stronger views about areas they resided/operated in.

LPG MARKET IN NIGERIA INSIGHTS TO BE CHanneled INTO TAC CAMPAIGN DEVELOPMENT

- Market analysis findings (supplier perspectives) will inform immersion process combined with market (consumer) research and 5Cs workshop to fully understand top acceptability and awareness barriers.
- Centralization of LPG activity in Lagos and higher 4A levels across Lagos indicate a need for campaign resources and efforts to prioritize Lagos over Abuja for scale (all 4As)
- B2B marketing approach needed as part of TAC for entire value chain from higher tier to large part of value chain-unregulated street sellers of LPG cylinders and gas
- Validity, strength and frequency of stakeholder perspectives on 4A levels in Lagos and Abuja geographies low and varied greatly based on urban, semi urban and rural locations. Market research findings on market segments will be critical.

OPPORTUNITIES TO POSITIVELY IMPACT LPG UPTAKE IN NIGERIA BEYOND TAC CAMPAIGN

- The Nigeria LPG sector stakeholders collectively and individually should consider larger investments in industry mapping, consumer segmentation and routine LPG information gathering.
- TAC efforts and findings can be leveraged for broader nationwide LPG uptake effort to support Government and stakeholder plans to convert 10 million households to LPG over the next five years

APPRECIATION



NIGERIAN ALLIANCE FOR
CLEAN COOKSTOVES



FEDERAL MINISTRY OF
PETROLEUM RESOURCES
Harnessing Mineral Resources in Nigeria



SOURCES

- Federal Ministry of Petroleum Resources: Nigeria Domestic LPG Expansion Implementation Plan: Domestic LPG Inter-Ministerial Committee-
- Domestic LPG Growth Prospects: Findings from the NLNG Market Study
- Nigeria LPG Stakeholders Workshop: Domestic LPG

Expansion Initiative

- National policy on liquefied petroleum gas (LPG) In Nigeria, Ministry of Budget and National Planning
- Draft National Gas Policy: Nigeria Government Policy and Actions. Committee-Federal Ministry of Petroleum Resources



THANK YOU