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Global Alliance for Clean Cookstoves

South Africa Market Assessment

Intervention Options

Introduction

- This Market Assessment was conducted by Accenture Development Partnerships (ADP), the not-for-profit arm of the global management consultancy, Accenture, on behalf of the Global Alliance for Clean Cookstoves (the Alliance).
- It is intended to provide a high level snapshot of the sector that can then be used in conjunction with a number of research papers, consumer surveys and other sources (most published on the Alliance's website) to enhance sector market understanding and help the Alliance decide which countries and regions to prioritize.
- It is one of sixteen such assessments completed by the Alliance to:
 - Enhance sector market intelligence and knowledge.; and
 - Contribute to a process leading to the Alliance deciding which regions/countries it will prioritize.
- Full slate of market assessments include studies in: Bangladesh, Brazil, Colombia, East Timor, Ethiopia, Ghana, Indonesia, Kenya, Mexico, Nigeria, Peru, Rwanda, South Africa, Tanzania, Uganda and Vietnam.
- Each assessment has two parts:
 - Sector Mapping – an objective mapping of the sector.
 - Intervention Options – suggestions for removing the many barriers that currently prevent the creation of a thriving market for clean cooking solutions.
- In each Alliance study a combination of ADP and local consultants spent 4-6 weeks in country conducting a combination of primary (in-depth interviews) and secondary research. They used the same Market Assessment 'Toolkit' for each country so that comparisons can be made. The Toolkit is available free of charge to all organizations wishing to use it in other countries.
- **The Alliance wishes to acknowledge the generous support of the following donors for the market assessments: Barr Foundation, Dow Corning Corporation, Shell Corporation, Shell Foundation, and the governments of Canada, Finland, and Spain.**

This market assessment was produced by Accenture Development Partnerships (ADP) on behalf of the Alliance. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the Global Alliance for Clean Cookstoves or its partners. The Alliance does not guarantee the accuracy of the data.

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Strategy Context

Recommended Interventions

South Africa is a complex market for clean cookstoves and fuels and no one solution will overcome all the issues, hence multiple strategies are needed.

South Africa is a Complex Market

There are multiple different customer segments

- Shack fires for paraffin users
- IAP biomass users
- Energy poverty

Many people have access to clean fuels, but do not use them

- People use paraffin and biomass even when they have access to electricity
- LPG is available but is not widely used

Competing agendas are distorting the market

- Electricity is being advanced by the government, but many rural and urban areas are still without
- Government supports biomass and paraffin

Multiple strategies are needed

- There is no single solution or technology that can meet all the customer needs or overcome all of the issues in such a complex market
- Thus, multiple strategies are needed
- This allows customers to make informed decisions about what fuel they use for cookstoves
- However, it is critical that supporting organisations ensure that customers have the best options available
- The goal is to develop a market where customers have a range of safe, clean, and affordable cooking solutions that they can choose from depending on their needs

12 Recommended Strategies

Recommended Strategies

South Africa is a complex market for clean cooking solutions, and no one solution will suffice. 12 strategies have been identified that might be useful in helping to address the major gaps to widespread adoption of clean cooking solutions.

Obtain and Increase Government Support at All levels

1. Establish an advocacy group representing the interests of clean cookstove and fuels organisations
2. Utilise international stakeholders to help spur government interest
3. Develop municipal level offerings and support implementation

Reduce Impacts of Biomass and Paraffin cookstoves

4. Increase the adoption of advanced cookstoves
5. Encourage behavioural changes to reduce health and environmental risks of biomass use
6. Support safe and affordable paraffin cookstoves
7. Increase public awareness around paraffin cookstoves safety

Encourage the Use of Clean Fuels (When Possible)

8. Develop better marketing and communication materials around electricity
9. Make LPG more attractive to customers
10. Investigate liquid ethanol with the assistance of specialised ethanol implementers

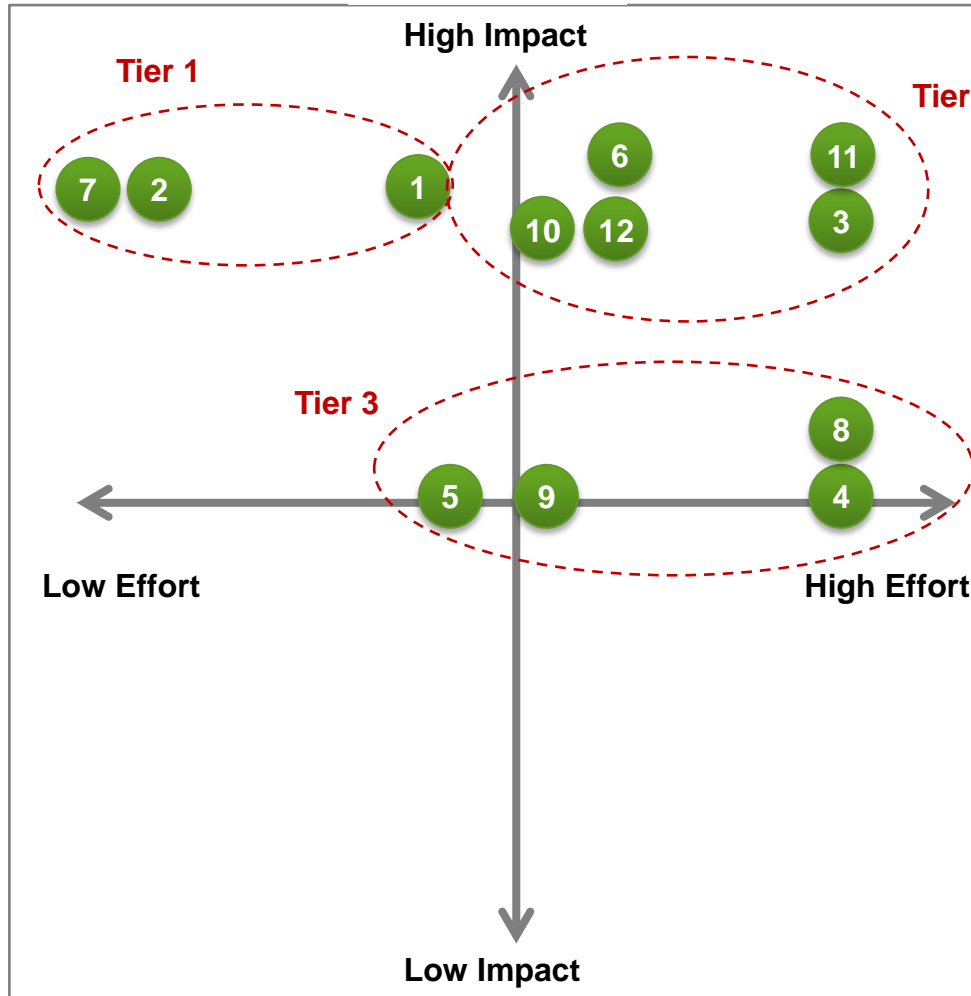
Enable Economic Growth Through Cookstoves

11. Encourage the development of local entrepreneurs to sell advanced cookstoves in communities
12. Encourage people to use complementary technologies or clean cooking solutions to achieve additional energy savings

Prioritisation of Strategy Implementation

Increasing public awareness of paraffin cookstoves and engaging the national government in global efforts to address the issue and mobilize for action are critical priorities.

- Prioritisation -



- Strategies -

1. Establish an advocacy group representing the interests of clean cookstove and fuel organisations
2. Engage the National Government in global efforts
3. Develop municipal level offerings and support implementation
4. Increase the adoption of advanced cookstoves and fuels
5. Encourage behavioural changes to reduce risks from biomass use
6. Support safe and affordable paraffin cookstoves
7. Increase public awareness around paraffin cookstoves safety
8. Develop marketing and communications around electric cookstoves
9. Make LPG more attractive to customers
10. Investigate liquid ethanol with the assistance of specialised ethanol implementers
11. Encourage the development of local entrepreneurs to sell advanced cookstoves in communities
12. Encourage people to use complementary technologies or clean cooking solutions

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Sector Mapping Summary

Situation

- South Africa is a middle-income regional power, and emerging market with an abundant supply of natural resources, a number of strong industries, and modern infrastructure.
- More than 10.1M people in South Africa use solid fuels for cooking.
- HIV/AIDS and unemployment have seized the bulk of attention from the health community in South Africa and indoor air pollution is not viewed yet as a major government priority.
- The problems related to cookstoves are unique to different geographic regions, and require unique interventions.
- Dirty, inefficient cookstoves and open fires cause major issues in South Africa, particularly around shack fires and energy poverty.
- Different geographic regions already have market-based channels for cookstoves and fuel products.
- In the current market, paraffin, LPG and electric cookstoves are attractive options, however, more attention needs to be given to biomass-fueled cookstoves to address the needs of 'rural' communities.
- South Africa has all the capabilities to develop an effective cookstoves value chain, however, there are few organisations focused on raising awareness.

Implications for Intervention Options

Situation

- A Black Economic Empowerment-friendly cookstove programme that aligns with the central sustainability plan and caters to diverse provincial administrations is essential for obtaining political support.
- The country needs employment generating activities; any program that stimulates employment will be much better received by the government and local population.
- Stakeholders such as the government and communities may not view Indoor Air Pollution (IAP) as a priority issue, given the urgency of other priorities.
- There is opportunity to generate awareness and create programs to mitigate health and social hazards, especially around safety and cost.
- The large variation in energy use across provinces suggests that any intervention must fully address the needs of its target region and tailor actions accordingly.
- The potential target market for advanced cooking solutions is over 30 million people in South Africa.
- Any improved cookstove will need to be priced competitively compared to existing cookstoves to stand a chance of success with customers in the marketplace.
- A low cost for fuel is critical for an improved cookstoves program, but it is also critical that customers are educated about how to interpret different prices.
- It is critical to develop an advocacy group or Alliance that can connect market players and raise awareness among government officials and households.

The Case for Action Now

Situation

A stronger government focus on the problems related to use of inefficient cookstoves and open fires is critical to any major improvement in the situation, yet unlikely without any formal external interventions.

- The Case for Action -

What's Happening?

Shack fires, indoor air pollution and energy poverty are major problems in the country.

Several small organisations are trying to pilot improvement initiatives.

So What?

These organisations are having limited success.

These issues are not at the forefront of government or social agendas.

Why Now?

People in the community are suffering.

Without external intervention there is unlikely to be any immediate solution.

Continued urbanisation will likely make problems worse.

Assumptions and Perspectives

Situation

Recommendations are made based on the following assumptions and perspectives.

- Clean cookstoves encompass a variety of stove and fuel types. Any improvement upon the status quo is recommended, whether it is moving from open fires to improved biomass cookstoves, or from paraffin cookstoves to electricity.
- Recommendations are focused on encouraging a sustainable market-based solution.
- Given the variety of different communities and needs in South Africa, it is not possible to recommend a single solution or approach. We do not advocate one fuel or type of cookstove over another. Geographic and economic factors dictate which types of fuel makes sense for a community.
- Recommendations are based on a preliminary market assessment and have been based on both primary and secondary research, and are designed to give a high-level view. Further refinement of recommendations may be required to provide a better sense of the needs of specific regions.
- Many of the organisations listed in this section as 'potential players' are only indicative. Whilst these organisation have been engaged, further discussions need to be held to review this document, obtain their feedback, and agree on an approach going forward.

Strategy Context

Recommended Interventions

South Africa is a complex market for clean cookstoves and fuels and no one solution will overcome all the issues, hence multiple strategies are needed.

South Africa is a Complex Market

There are multiple different customer segments

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Competing agendas are distorting the market

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Obtain and Increase Government Support at All level

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Enable Economic Growth Through Cookstoves

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12. Encourage people to use complementary technologies or clean cooking solutions to achieve additional energy savings

Obtain and Increase Government Support at All Levels



Recommended Strategies

The government has not expressed strong interest in clean cookstove and fuels projects in South Africa. A three-prong campaign engaging the international community, current cookstoves organisations and local municipalities, could help to foster stronger interest.

Objective and Outcomes

There is critical need for clean cooking initiatives in South Africa, and the government must be engaged as a key gate keeper for funding and access to the community.

The Case for Action

- Government is focused on universal electrification and has not focused on critical interim strategies such as paraffin cookstoves or improved biomass cookstoves.
- The government should be engaged in any effort to establish new clean cooking initiatives.
- There examples of different technologies being implemented in municipalities that are not shared widely.
- More organisations and local governments are inquiring about the Free Basic Alternative Energy Policy for cookstoves projects.

Recommended Strategies

- 1 **Establish advocacy group or national alliance representing the interests of clean cookstoves and fuels organizations**
- 2 **Utilise international engagement to mobilize action by the National Government**
- 3 **Develop municipal level offerings and support adoption of clean cooking solutions**

Recommended Strategies- Level of Effort and Impact



Recommended Strategies

Obtain and Increase Government Support at All Levels

Reduce Impacts from Biomass and Paraffin cookstoves

Encourage the Use of Advanced or Clean Fuels

Enable Economic Growth through Cookstoves

Recommended Strategies

Level of Effort

Level of Impact

1
Establish advocacy group representing the interests of clean cookstoves organisations

-Moderate-

Create a new advocacy group to reach out to potential members, securing stable funding and building support within the government. The group will have to balance differing priorities among members.

-High-

An Alliance could help cookstoves stakeholders advance their agendas quicker, and allow people to have access to safer and more affordable fuel sources sooner.

2
Utilise international influence to spur action by the National Government

-Low-

There is a clear case for change so the Alliance, other international influencers, and the media should draw attention to the issue and pressure the government to address unsafe cookstoves as a priority.

-High-

The Government is sensitive to international opinion, and is more likely to take swift action if it is perceived that people are dying from use of dirty cookstoves and fuels.

3
Develop municipal level offerings and support implementation

-High-

It will require a high level of effort to document the best cookstoves practices, and to create scalable programs to introduce to other municipalities. Ongoing support will be needed to implement programs.

-High-

Sharing and implementing learnings are critical to reaching a greater number of people. It will decrease start-up barriers for municipalities.

Establish a Lobby Group

By establishing a South African Alliance, stakeholders in the clean cooking sector within South Africa will have a stronger voice and can be more effective.

- Strategy -

1

Establish an advocacy group or local Alliance representing the interests of clean cooking organisations

The National Government is a barrier to many cookstoves initiatives because they primarily support electricity and LPG. Meanwhile, people are dying from shack fires and respiratory diseases due to improper biomass and paraffin cookstove use. A n Alliance can bring awareness to clean cookstoves issues and give a united voice to the various stakeholders.

- Actions -

-Set Up-

Set up a new Alliance focused on representing the interests of clean cookstoves and fuel stakeholders to National, District and Municipal governments.

-Financing-

Provide seed funding to start up operations of new lobbyist organisation.

-Recruit Supporters-

Attract member organisations (see appendix for sample list)

Find clean cooking champions within government and work to increase support in the National, District and Municipal governments.

- Potential Players -



Utilise International Influence

The South African National Government could be more engaged in clean cooking initiatives and international attention is necessary to shift their minds.

- Strategy -

2

Utilise international influence to spur action by the National Government

The international community has recognized the importance of clean cookstoves, as shown by the creation of the Alliance. The South African government has not embraced the importance of the issue, so the international community must encourage South Africa to join the global movement.

- Actions -

-Share Previous Successes-

Use Alliance successes in other countries to pressure the National Government to support clean cookstove initiatives in South Africa.

-Leverage Media-

Use local and international media to drive public awareness of the issues with paraffin (shack fires) and biomass (deforestation).

-Conduct Business Case-

Conduct business case and educate the government on the extent of financial, health and social impacts due to improper cookstove use.

-Lobby For Standards Policy-

Lobby the government to introduce a holistic household energy policy defining health and safety standards for cookstoves (esp. storage, fire extinguishers, emergency procedures).

- Potential Players -



New Lobby Group



Support Municipalities

Recommended Strategies

Some municipalities have had success with clean cooking initiatives, but best practices have not been widely adopted. By bundling best practices into a scalable offering, municipalities are more likely to implement.

- Strategy -

3

Develop municipal level offerings and support implementation and adoption

Create a scalable program that incorporates best practices of clean cookstoves and help municipalities to implement. This may involve financing mechanisms such as the Free Basic Alternative Energy Policy or carbon financing.

- Actions -

-Align Goals-

Understand and align offering with Reconstruction and Development Programme in each municipality.

-Lobby for Alternative Energy-

Since universal electrification is years away, local municipalities should support transitional fuels such as biomass, paraffin, etc.

-Introduce Best Practices-

Develop 'playbook' of approaches government could take.

Develop a database of cookstoves projects in South Africa.

Encourage community leaders to share experiences from their cookstoves projects.

-Financing strategies-

Connect municipalities with cookstoves financing programmes such as Free Basic Alternative Energy Policy and carbon financing.

- Potential Players -



Reduce Impacts of Biomass and Paraffin cookstoves



Recommended Strategies

Although the government is encouraging South Africans to move toward LPG and electric cookstoves, many households still use biomass and paraffin cookstoves. Work must therefore be done to reduce the health and social risks associated with use of these cookstoves and fuels.

Objective and Outcomes

Since a majority of the population still uses biomass and paraffin cookstoves, emissions, safety, and cost are important issues to address.

The Case for Action

- Geographic location and customer income level often dictate fuel choice.
- There is still high biomass and paraffin usage, especially in rural and township communities.
- Biomass cookstoves (especially open fires) are harmful to the environment and to the health of the members of the household.
- There are no safe and economic paraffin cookstoves on the market.
- Over 4,000 people die from shack fires each year, which arises from accidents, misuse, and poor product design.

Recommended Strategies

- 4 Increase adoption of advanced biomass cookstoves
- 5 Encourage behavioural changes to reduce risks from combustion of biomass
- 6 Support safe, clean, and affordable paraffin cookstoves
- 7 Increase public awareness around paraffin cookstoves safety

Recommended Strategies- Level of Effort and Impact



Recommended Strategies

Obtain and
Increase
Government
Support at All level

Reduce Impacts of
Biomass and
Paraffin
cookstoves

Encourage the Use
of Sophisticated
Fuels (When
Possible)

Enable Economic
Growth Through
Cookstoves

Recommended Strategies

Level of Effort

Level of Impact

4

Increase the adoption of advanced biomass cookstoves

-High-

People are accustomed to open fires and will need to be sold on the benefits of upgrading. Indoor air pollution and deforestation is not a compelling argument for consumers to switch cookstoves or fuels.

-Moderate-

People do not aspire to own an improved biomass cookstove, but rather look towards electric cookstoves as an upgrade. Adoption will be challenging.

5

Encourage behavioural changes to reduce risks of biomass use

-Moderate-

Existing NGO partners and government organisation can implement this, but will require assistance.

-Moderate-

The number of deaths related to indoor air pollution is relatively low in South Africa. Education may reduce respiratory and other health problems.

6

Support clean, safe,, and affordable paraffin cookstoves

-Moderate-

Leverage current models to design a paraffin cookstove specific to the South African market. Some current models may only require minimal design modifications .

-High-

Since there is no safe and affordable product widely distributed on the market, an advanced cookstove should replace all existing products. Additionally, it could be exported internationally.

7

Increase public awareness around paraffin cookstoves safety

-Low-

Household education on storage and proper use of paraffin cookstoves can drastically reduce risk of accidents.

-High-

Shack fires kill thousands and render thousands more homeless. Reducing risk of paraffin accidents will have a huge impact, especially in crowded townships.

Increase Adoption of Clean Cookstoves and Fuels

4

Recommended Strategies

Advanced cookstoves can generate economic, environmental, social, and health benefits. Since customers have little ability to pay for the higher initial cost, different funding models must be evaluated.

- Strategy -

- Actions -

- Potential Players -

4

Increase the adoption advanced cookstoves

With over 10.1M people still using biomass cookstoves in South Africa, there is a need to foster greater adoption of advanced cookstoves. These cookstoves will have increased efficiency, as well as reduce health and social impacts.

-Gov Funding-

Design clean cookstoves initiatives using funding from the Free Basic Alternative Energy Policy in municipalities outside of the national grid.



-Carbon Funding-

Use carbon financing to fund small projects with the collaboration of local carbon financier partners.



-Encourage Distributors-

Encourage organisations who have been successful in cookstoves distribution to explore the South Africa market.



-Generate Demand-

Conduct product demonstrations during community meetings in rural regions. Give free samples to community leaders and ask them to provide testimonials.



-Improve Supply-

Work with local manufacturers to produce improved cookstoves. Ask government for support, as jobs are created.



Encourage Behavioural Changes With Biomass Use

5

Recommended Strategies

Biomass cookstoves are very popular in rural communities. Since there is a strong preference for open fires inside shacks, interventions are needed to address the smoke inhalation.

- Strategy -

5

Encourage behavioural changes to reduce health risks of biomass use

Many households in the rural communities still use open fires, oftentimes within covered shacks. To reduce risk of respiratory disease from the intense smoke, greater ventilation is recommended.

- Actions -

-Distribute Health Messages-

Use health clinics, healthcare providers, health pamphlets and TV campaigns to communicate:

- Dangers of continuous exposure to smoke.
- Children and babies should not be close to the fire
- Dry wood prior to use
- Use pot lids to minimize smoke and heat food more quickly and efficiently

-Encourage Greater Ventilation-

Encourage greater ventilation in cooking shacks, such as installing a chimney.

Subsidize a portion of the costs of chimney installation

Work to develop standards and guidelines for proper chimney installation.

- Potential Players -



New Advocacy Group



Support Safe and Affordable Paraffin cookstoves

6

Recommended Strategies

Designing and encouraging adoption of clean, safe, and affordable paraffin cookstoves will save thousands of lives. South Africa could become a leading producer of paraffin cookstoves for both domestic use and export.

- Strategy -

6

Support development of clean, safe, and affordable paraffin cookstoves

Currently, there are no clean, safe and affordable paraffin cookstoves on the market. Even government approved cookstoves cause fires when knocked over. A few products in development seem promising and need support to bring to market.

- Actions -

-Product Design-

Capture customer requirements to inform designs tailored to South African market needs.

-Manufacturing-

Partner with local manufacturers to develop and produce cookstoves. Locally produced cookstoves will create jobs, and up skill the local work force.

-Financing-

Introduce microfinance and pay by installment options to make purchase easier.

-Marketing-

Develop marketing campaigns targeting community influencers.

-Product Recall-

Remove existing unsafe cookstoves by offering a 'cash back' incentive when customers return old products. Otherwise, customers will keep using their unsafe cookstoves.

- Potential Players -



Paraffin Safety Association
Southern Africa



energy
Department:
Energy
REPUBLIC OF SOUTH AFRICA



**New Advocacy
Group**



energy
Department:
Energy
REPUBLIC OF SOUTH AFRICA



Increase Awareness Around Paraffin cookstove Safety

7

Recommended Strategies

Organisations are spreading messages around paraffin safety, but the information needs to reach a greater number of households.

- Strategy -

7

Increase awareness around paraffin cookstove safety

Paraffin cookstoves are extremely flammable. Shack fires kill over 4,000 people every year. Additionally, thousands more are displaced as densely populated areas set off chain reactions of shack fires.

Transport of paraffin is unsafe and is often carried in soda bottles. Children often accidentally ingest the paraffin.

- Actions -

-Health and Public Safety Messaging-

Use health clinics, healthcare providers, health pamphlets, and TV campaigns to communicate:

- Proper storage of paraffin fuel
- Where to place paraffin cookstoves
- Emergency procedures (e.g. stop, drop and roll)
- Emergency escape plan

-Paraffin Transport Policy-

Mandate safety controls around paraffin transport, such as safety caps and safety bottles.

- Potential Players -



Paraffin Safety Association
Southern Africa



energy
Department:
Energy
REPUBLIC OF SOUTH AFRICA



Paraffin Safety Association
Southern Africa



energy
Department:
Energy
REPUBLIC OF SOUTH AFRICA

Encourage Use of Clean Cooking Fuels

Many customers with access to clean fuels do not use them because of a lack of understanding. Providing information that expresses the benefits and costs in terms that customers will understand will help to encourage adoption.

Objective and Outcomes

Where possible, encourage customers that can afford and access to clean cooking fuels to use them, thus allowing improvements in energy poverty and growth in different fuel types.

The Case for Action

- There are many different fuels on the market with various prices .
- A major barrier to adoption of clean technology is that customers do not understand the different types of energy products and what they mean (e.g., 91 units of electricity is very difficult to understand in terms of hours of cooking).
- This leads to incorrect assumptions and poor decisions. This is particularly true for when customers are moving from paraffin or wood, to electricity or LPG, as these are new fuels that they likely have not used previously.

Recommended Strategies

8

Develop better marketing and communications around electricity for cooking

9

Make LPG more attractive to customers

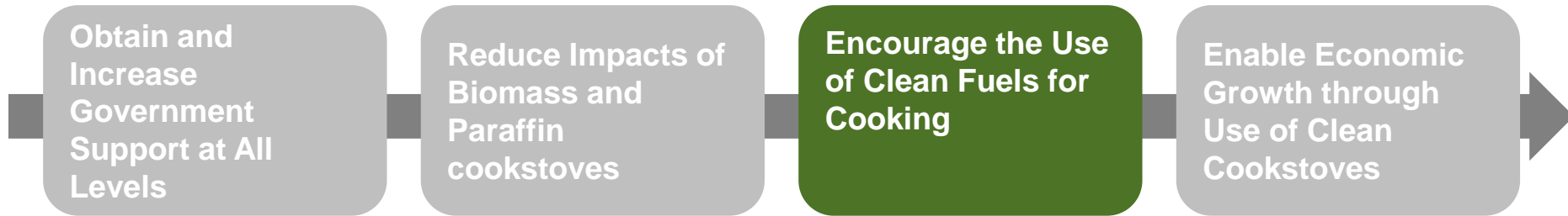
10

Investigate liquid ethanol with the assistance of specialised ethanol implementers

Recommended Strategies- Level of Effort and Impact



Recommended Strategies



Recommended Strategies

Level of Effort

Level of Impact

8

Develop better marketing and communications around electric cookstoves

-High-

Education and awareness campaigns are often costly and take a long time period to achieve lasting, tangible results. It will require changing customer attitudes about electricity and justifying financial costs.

-Moderate-

Some households who have access do not use electricity for cooking. They are unclear on true costs and therefore revert to less clean fuels.

9

Develop better marketing and communications around LPG cookstoves

-Moderate-

There is clear appetite for LPG but supply has been historically inconsistent. Ironing out this supply variation is a government level challenge. Smaller container sizes may also not be financially or logistically viable.

-Moderate-

Increased LPG usage is both aspirational, achievable and practical. It could certainly help in urban and peri-urban areas.

10

Investigate liquid ethanol with the assistance of specialised ethanol implementers

-Moderate-

Introducing a new and unfamiliar fuel takes effort to convince consumers of its benefits and educate them on its characteristics.

-Low-

Ethanol is not widely recognized as a fuel among the poor.

Improve Information on Electricity

The amount of electricity consumption in cooking is not easily understood, which makes it difficult for people to make informed decisions about what fuel to use.

- Strategy -

8

Develop better marketing and communications around electric cookstoves

Research shows that electricity is the least expensive fuel source that consumers can purchase for cooking. With the public attention on rising electricity costs in South Africa, some households are hesitant to use electricity.

- Actions -

-Clear Information on Electricity-

Illustrate the real cost of electricity to make it understandable to the average household. Potential initiatives could include:

- Produce pamphlets that explain how electricity compares to different types of cooking fuels
- Explain how much it costs to cook certain meals using electricity versus other fuel sources. Costs should reflect municipal level pricing since different regions have different electricity costs
- Explains how the smart meter works and what 'units' means in common language
- Educate on the dangers of makeshift electrical connections

- Potential Players -



Make LPG More Attractive

LPG is a very clean fuel, but has suffered from lack of customer understanding and supply problems. It is unlikely that LPG will be applicable for the whole country, but if specific regions are targeted then many of the problems can be overcome and adoption can be increased.

- Strategy -

9

Make LPG more attractive to customers

Liquefied petroleum gas is a common cooking fuel in many developed countries. In South Africa, limited supply and high cost are key deterrents to its use. Additionally, some households fear LPG canister explosions.

- Actions -

-LPG Supply-

Target specific areas for LPG intervention and ensure a stable supply of LPG.

-LPG Safety-

Develop communications and marketing materials that explain the true cost and safety of LPG.

-LPG Containers-

Introduce smaller size canisters to reduce up-front costs and make transportation easier.

Subsidise LPG transport containers. There is a large barrier to entry of using LPG because households must purchase a container (R200).

- Potential Players -



Investigate Ethanol

South Africa has the potential to use ethanol for cooking, but needs to have a strong value proposition over paraffin before it will be widely accepted.

- Strategy -

10

Investigate liquid ethanol with the assistance of specialised ethanol implementers

Ethanol can be produced from many agricultural waste products, which supports green energy production. It is widely available through various retailers across South Africa.

Customer demand is not high, as ethanol gel has lower calorific content than other fuel sources. Liquid ethanol is a poison when ingested.

- Actions -

-International Potential Partners-

Develop joint plan with international ethanol implementers

-Local Partners-

Engage local ethanol gel producers, and NGOs and encourage the use of liquid ethanol.

-Decision Point-

Conduct a thorough assessment and validate the opportunity for ethanol with local and international partners before proceeding.

-Consistent Supply-

Work with ethanol producers to understand availability of consistent supply.

-Health and Safety-

Work with ethanol producers to introduce bittering agents into liquid ethanol to reduce accidental poisonings

- Potential Players -



**New
Advocacy
Group**



***All parties
involved in
ethanol***

***Local partners
and producers***

Enable Economic Growth through Development of Clean Cooking Solutions



Recommended Strategies

Clean cookstoves can not only improve health, but can also improve the economy and create jobs. Having a multi-dimensioned approach helps to ensure that both social and political agendas are satisfied, which helps acceptance of programs.

Objective and Outcomes

Use the enhancement and development of a clean cooking industry to drive economic growth and create jobs, particularly for those at the base of the pyramid.

The Case for Action

- A critical issue for South Africa is the high level of unemployment, which is on the top of government agendas.
- Whilst, the cookstove market is fairly mature, clean cooking solutions often do not reach last mile communities because there is no local person selling and marketing them.
- Developing strategies that help develop a market for advanced cookstoves and clean fuels will help foster political support and develop jobs

Recommended Strategies

11

Encourage the development of local entrepreneurs to sell and distribute clean cookstoves in communities

12

Encourage people to use complementary clean cooking technologies and fuels to achieve additional energy savings

Recommended Strategies- Level of Effort and Impact



Recommended Strategies



Recommended Strategies

Level of Effort

Level of Impact

11

Encourage the development of local entrepreneurs to sell clean cookstoves in communities

-High-

South Africans have an entrepreneurial culture but many lack the necessary skills to grow businesses, especially in townships and poorer areas reliant on biomass. Much coaching and a solid business model would be required to make this work

-High-

The market system is strong here and the desire to succeed significant. With the right recruitment and coaching, local entrepreneurs could be a highly effective way of educating communities and spurring last mile distribution

12

Encourage people to use complementary technologies to achieve additional energy savings

-Moderate-

Alternative technologies are useful and can offset some of a households electricity consumption, Convincing communities to invest time and effort in these strategies will require campaigns and awareness raising

-Moderate-

Alternate technologies like retained heat cookers can provide jobs through local manufacturing and help lower fuel expenses

Develop Local Entrepreneurs

To achieve the 'last mile' distribution, local small scale entrepreneurs should be encouraged

- Strategy -

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Encourage the development of local entrepreneurs to sell cookstoves in communities

South Africa is highly entrepreneurial and many people have started their own distribution business, such as tuck shops and street stands. By providing effective training and continued support, these entrepreneurs can serve as 'last mile' distribution agents for a variety of clean cookstoves and fuel s.

- Actions -

-NGO Partnership-

Partner with an NGO who has experience setting up small entrepreneurs to obtain best practices and spur potential operations in South Africa.

-IEC Partnership-

Leverage local energy centres as focal points to manage entrepreneurs and hold inventory of products that include advanced cooking solutions and other energy products.

-Extensive Training-

Develop training materials for both local entrepreneurs and partner organisation that will manage the entrepreneurs.

- Potential Players -



Support Complementary Technologies

There are other products available, apart from cookstoves, that help to reduce energy poverty. A holistic approach helps to ensure that there is greater awareness among customers about energy usage and ways to reduce energy use.

- Strategy -

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Encourage people to use complementary technologies to achieve additional energy savings

Low income households are allotted 50 kWh of free electricity per month. If energy-saving devices can be used, more of the free electricity can be applied towards clean cooking.

- Actions -

-Bundle with Wonderbag-

Offer product bundles that includes Wonderbags (insulated bags that continue cooking food once removed from heat) with cleaner fuels such as electricity and LPG

-Electricity Substitutes-

Promote other energy saving products such as solar lights to reduce electricity consumption and allow more available electricity for cooking

- Potential Players -



energy
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Energy
REPUBLIC OF SOUTH AFRICA



Executive Summary

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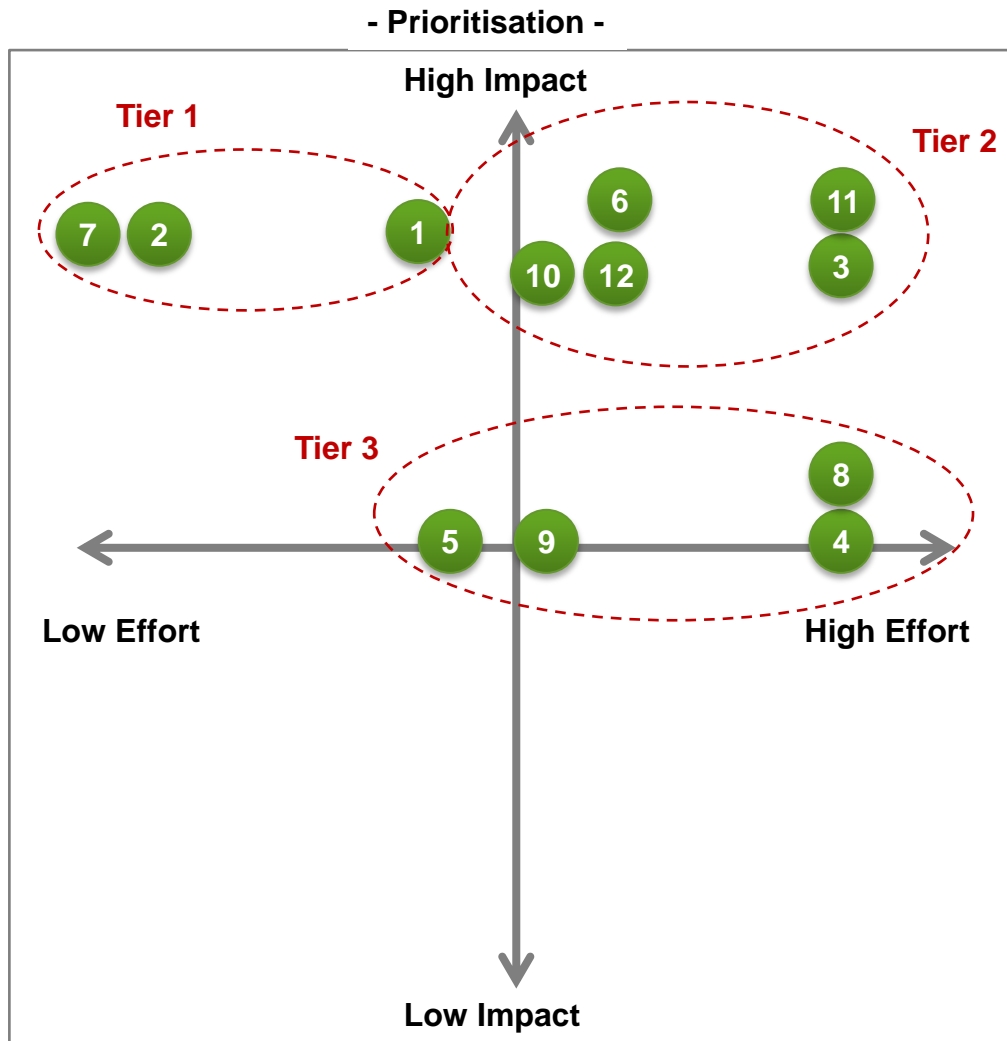
Recommended Strategies

Roadmap

Appendix

Prioritisation of Strategy Implementation

Increasing public awareness of paraffin cookstoves and using international partners to spur the national government into action are the critical priorities.



- Strategies -

1. Establish an advocacy group representing the interests of clean cooking stakeholders
2. Utilise international partnerships to spur action by the National Government
3. Develop municipal level offerings and support implementation
4. Increase the adoption of advanced cookstoves
5. Encourage behavioural changes to reduce risks of biomass use
6. Support clean, safe, and affordable paraffin cookstoves
7. Increase public awareness around paraffin cookstoves safety
8. Develop better marketing and communications around electric cookstoves
9. Help make LPG more attractive and available to customers
10. Investigate liquid ethanol as a clean fuel source
11. Encourage the development of local entrepreneurs to sell advanced cookstoves
11. Encourage people to use complementary technologies to achieve additional energy savings

Tier 1 Strategies

Tier 1 strategies are the most critical to implement first, as they make the biggest impact with the least effort. Additionally, securing government support will ease implementation of other strategies.

Roadmap				
	Q1 - Q2 2012	Q3 - Q4 2012	2013– 2014	2014 Onward
Establish an advocacy group representing the interests of clean cooking stakeholders	<ul style="list-style-type: none"> Set up advocacy group Apply for funding to establish an advocacy group 	<ul style="list-style-type: none"> Recruit member organisations (see appendix) Engage government organisations from National, District and Municipal 	<ul style="list-style-type: none"> Continue to develop relationships with the government at all levels 	<ul style="list-style-type: none"> Garner support for clean cooking initiatives by working closely with all levels of government
Utilise international influence to spur action by the National Government	<ul style="list-style-type: none"> Create press releases for international press Utilize Alliance connections to urge SA government to act 	<ul style="list-style-type: none"> Continue to create press releases on any progress (negative or positive) Encourage SA to share experiences internationally 	<ul style="list-style-type: none"> Use SA as case example for cookstoves success for other developing countries 	<ul style="list-style-type: none"> SA's knowledge of clean cookstoves can be used to support other African countries
Increase public awareness around paraffin cookstoves safety	<ul style="list-style-type: none"> Understand limitations for PSASA to increase awareness Support PSASA initiatives 	<ul style="list-style-type: none"> Work closely with PSASA to bring initiatives to large scale 	<ul style="list-style-type: none"> Continue to develop safety awareness campaigns with PSASA 	<ul style="list-style-type: none"> Support as needed

Tier 2 Strategies (1/2)

Tier 2 strategies require more effort upfront, but also deliver high impact.

Roadmap				
	Q1 - Q2 2012	Q3 - Q4 2012	2013– 2014	2014 Onward
Develop municipal level offerings and support implementation	<ul style="list-style-type: none"> • Compile clean cooking best practices in SA • Develop relationships with target municipalities 	<ul style="list-style-type: none"> • Develop playbook of successful clean cooking initiatives • Incorporate initiatives into municipality RDP planning 	<ul style="list-style-type: none"> • Provide support for clean cooking programme implementation • Initiate new programmes in other municipalities 	<ul style="list-style-type: none"> • Monitor and provide support as needed
Support safe and affordable paraffin cookstoves	<ul style="list-style-type: none"> • Understand upcoming cookstove product designs • Advise on safety and cost of cookstove design 	<ul style="list-style-type: none"> • Evaluate domestic manufacturing to create local jobs • Develop marketing campaigns to stimulate customer demand 	<ul style="list-style-type: none"> • Introduce microfinance options to make purchase easier • Remove unsafe cookstoves from market through product buy back program 	<ul style="list-style-type: none"> • Increase distribution of improved paraffin cookstoves
Investigate liquid ethanol as a clean fuel source	<ul style="list-style-type: none"> • Customer additional research on customer demand for ethanol cooking fuel 	<ul style="list-style-type: none"> • Address safety concerns such as adding bittering agents to prevent poisoning 	<ul style="list-style-type: none"> • Work with suppliers to achieve consistent supply 	<ul style="list-style-type: none"> • Support as needed

Tier 2 Strategies (2/2)

Tier 2 strategies require more effort, but deliver high impact.

Roadmap				
	Q1 - Q2 2012	Q3 - Q4 2012	2013– 2014	2014 Onward
Encourage the development of local entrepreneurs to sell cookstoves in communities	<ul style="list-style-type: none"> Partner with an NGO who has experience supporting entrepreneurs 	<ul style="list-style-type: none"> Develop extensive training for partner organisation and for entrepreneurs 	<ul style="list-style-type: none"> Leverage integrated energy centres and other local energy centres to serve as focal distribution sites 	<ul style="list-style-type: none"> Provide support as needed
Encourage people to use complementary technologies to achieve additional energy savings	<ul style="list-style-type: none"> Develop product bundles that pairs Wonderbags with advanced cookstoves such as electricity or LPG to reduce fuel costs 	<ul style="list-style-type: none"> Promote energy efficient lighting to allow for more available electricity for clean cooking 	<ul style="list-style-type: none"> Monitor upcoming energy saving initiatives 	<ul style="list-style-type: none"> Monitor upcoming energy saving initiatives Support implementation

Tier 3 Strategies (1/2)

Tier 3 strategies are the lowest priority grouping. However, strategies that spur adoption of advanced cookstoves could be much more effective with the support of government & advocacy groups.

Roadmap				
	Q1 - Q2 2012	Q3 - Q4 2012	2013– 2014	2014 Onward
Increase the adoption of improved cookstoves	<ul style="list-style-type: none"> • Research financing options to lower the cost of improved biomass cookstoves • Leverage best practices of successful NGOs 	<ul style="list-style-type: none"> • Provide customer education to generate demand • Improve supply by producing domestically 	<ul style="list-style-type: none"> • Increase wider distribution of improved biomass cookstoves 	<ul style="list-style-type: none"> • Increase wider distribution of improved biomass cookstoves
Encourage behavioural changes to reduce risks of biomass use	<ul style="list-style-type: none"> • Educate customers on the dangers of continuous exposure to smoke 	<ul style="list-style-type: none"> • Support initiatives to increase ventilation in indoor kitchens • Develop marketing materials to advise on safe cooking practices 	<ul style="list-style-type: none"> • Continue support 	<ul style="list-style-type: none"> • Continue support

Tier 3 Strategies (2/2)

Tier 3 strategies are the lowest priority grouping. However, strategies such as distribution of biomass cookstoves could be much more effective with the support of government & a national lobby group.

Roadmap				
	Q1 2012	Q2- Q4 2012	2013– 2014	2014 Onward
Develop better marketing and communications around electricity	<ul style="list-style-type: none"> • Develop partnership with Eskom to simplify messaging around electricity use 	<ul style="list-style-type: none"> • Produce materials that explain the real cost of cooking with electricity, as compared to other fuels • Simplify fuel labels 	<ul style="list-style-type: none"> • Leverage community representatives to communicate messages on electricity 	<ul style="list-style-type: none"> • Leverage community representatives to communicate messages on electricity
Make LPG more attractive to customers	<ul style="list-style-type: none"> • Target specific areas for LPG intervention and ensure a stable supply of LPG 	<ul style="list-style-type: none"> • Develop communications and marketing material that explains the true cost and safety of LPG 	<ul style="list-style-type: none"> • Introduce smaller size tanks to reduce up-front costs and make transportation easier. • Subsidise LPG transport containers, thereby reducing the R200 barrier to entry 	<ul style="list-style-type: none"> • Support as needed

Agenda

Appendix

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Potential Members of Advocacy Group

Appendix

Several organisations could be a good fit as potential members of a new South African Clean Cooking Advocacy Group.

cookstove Producers



Policy



Energy Suppliers



Carbon Finance



Safety

