

Survey Data from Namuwongo Household Energy Research - 2015



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As part of the SAMSET project the need to better understand energy issues across informal settlements of cities in Ghana, South Africa and Uganda is a key part of research being undertaken in order to develop knowledges on current energyscapes and plan for sustainable energy transitions. As part of this wider research we have undertaken a household survey in Kampala.

Namuwongo is an informal settlement in central Kampala with over 10,000 residents, adjacent to the industrial zone, the wetlands and alongside the railway leading into the central city area. Facing ongoing threats of demolition residents reside in a range of dwellings and engage in a series of different energy practices, linking up to different sources and undertaking many usages (see the accompanying photographic survey). Many of the residents in Namuwongo are poor and struggle for everyday essentials including fuel for cooking and light for the evening.

In March and April 2015 we conducted primary research with 100 households who participated in a survey designed by the research team and focused on energy issues and better understanding the particular and unique character of the energyscape in the neighbourhood. The survey included both quantitative and qualitative aspects and was deployed in order to generate data that seeks to understand the economic, social, technological and geographic characteristics of energy. The survey was conducted with two local research assistants, familiar with the neighbourhood and who were trained to undertake the survey, able to engage with residents in a variety of languages as well as using personal networks and connections to gain access. Two particular areas of the neighbourhood, representing the most intense zones of informality were chosen with surveying concentrated in these points and expanding outward. A pilot was undertaken of ten households to test its suitability, after the pilot it was decided to undertake the survey using phone technology to input the data into the online survey rather than use paper surveys. This saved much time and allowed for real time tracking and data collection.

This short report provides an initial presentation of the data that was generated from the survey work. It outlines the responses from the questions, presenting quantitative information on a range of indicators together with qualitative responses to a number of open questions. Further work has been undertaken to cross interrogate the data to provide a finer grain picture of the information and to consider how different indicators shape and affect the energy issues of residents.

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1. Household characteristics

In Namuwongo over 70 per cent of residents are renting premises for accommodation (Fig 1a). Those that own their homes always built their own dwellings, rather than purchasing from a third party (Fig 1b). The average size of a household of participants was 4.5 persons with an average of at least 3 children per household (Fig 1c). The average rent for the participating households is 87,620 shillings per month. Nearly 80 percent of participating residents are fearful of their dwellings being demolished (Fig 1d). Over 70 per cent of resident households consider their dwellings to be semi-permanent or temporary (Fig 1e). Most residents (70 per cent) have a household income of either 80,000 to 150,000 shillings per month or 160,000 to 250,000 shillings per month, with 10 per cent of participating households earning less than 75,000 shillings per month. Rent takes up a large proportion of people's income, especially for the lower income groups

£1 = 4000 shillings
£10 = 40,000 shillings

Fig 1a: Do you own or rent your house?

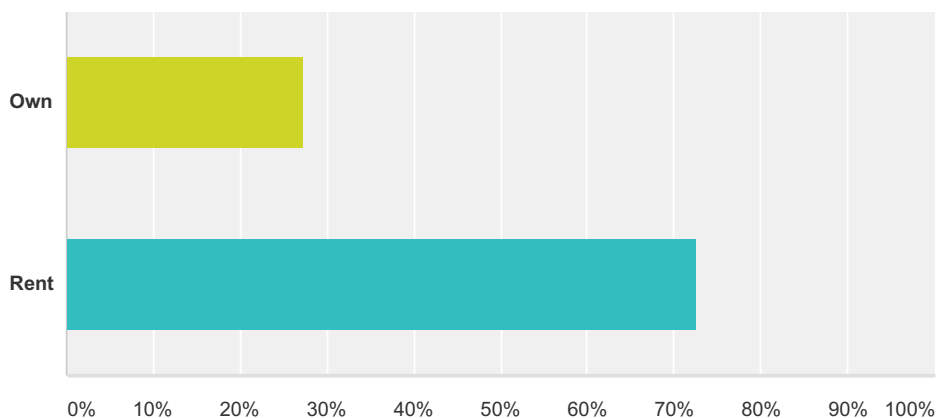


Fig 1b: If you own your house did you self build or purchase already built?

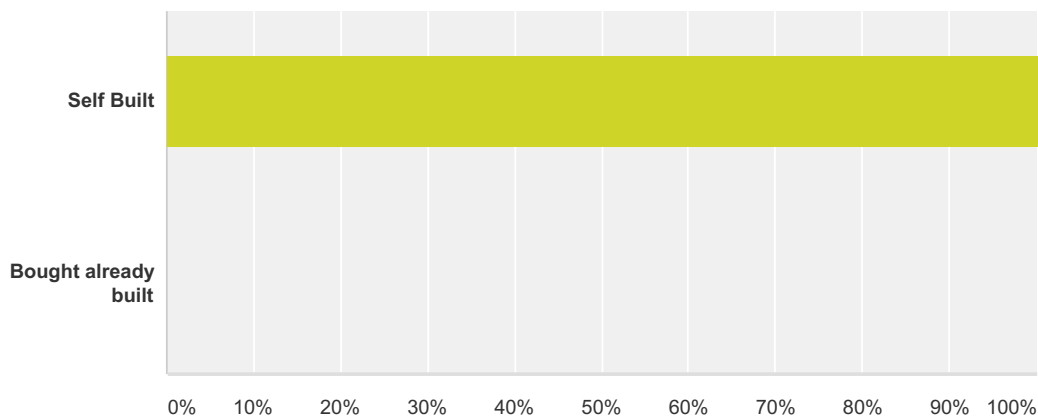


Fig 1c: What is your household size

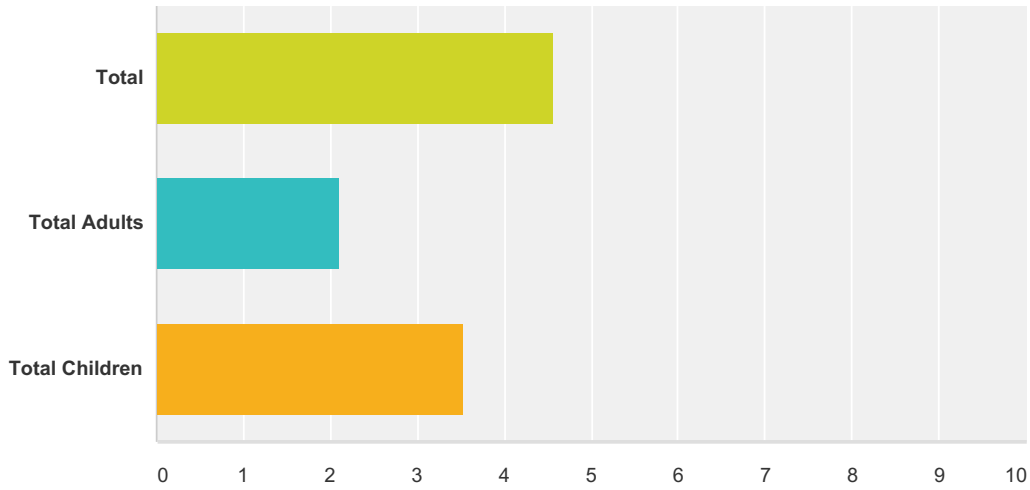


Fig 1d: Is your home at risk of demolition?

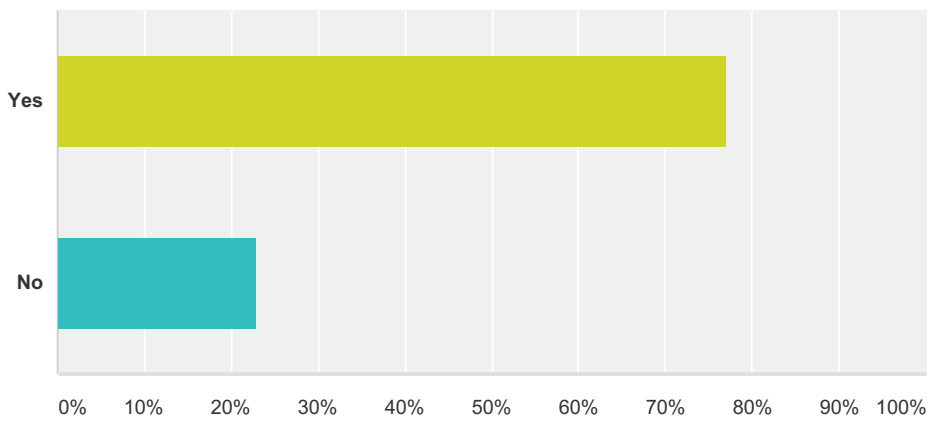


Fig 1e: What is the nature of your structure?

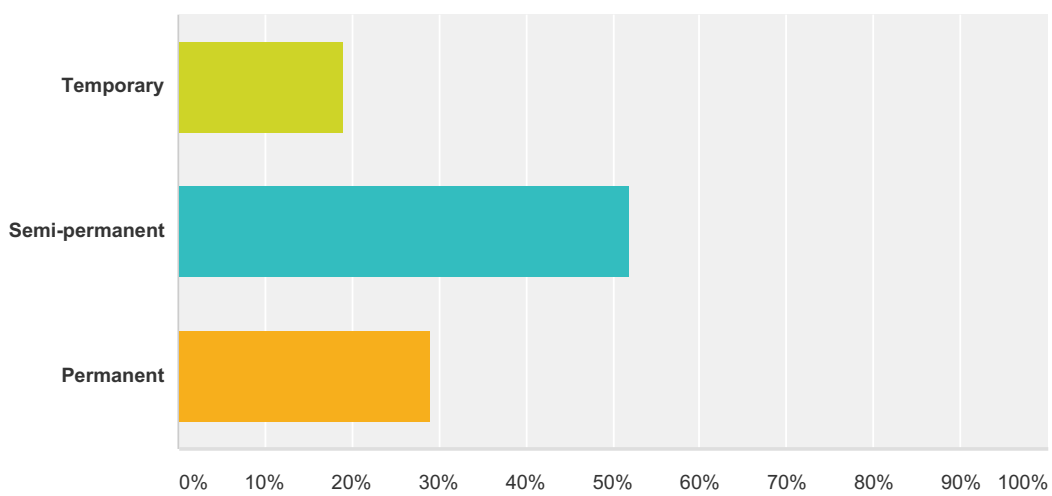


Fig 1f: What is your average household income per month?

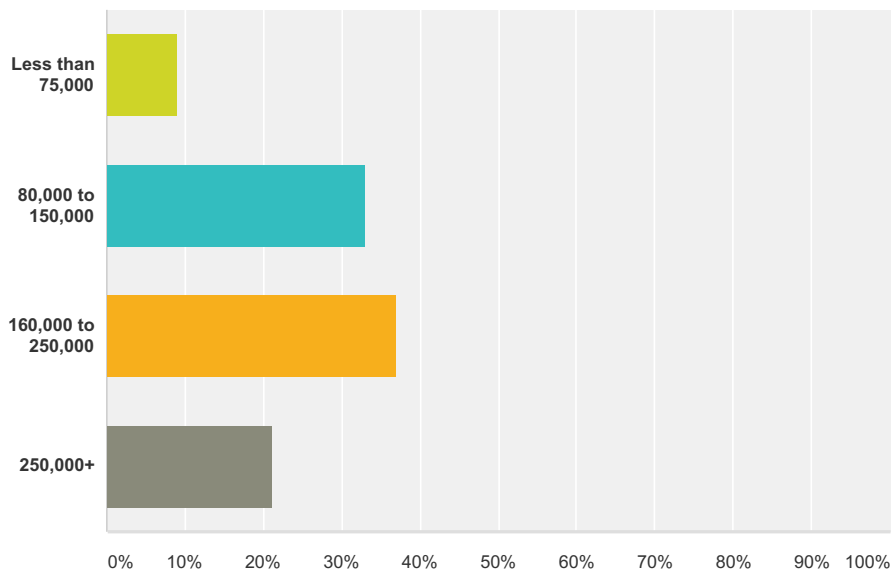
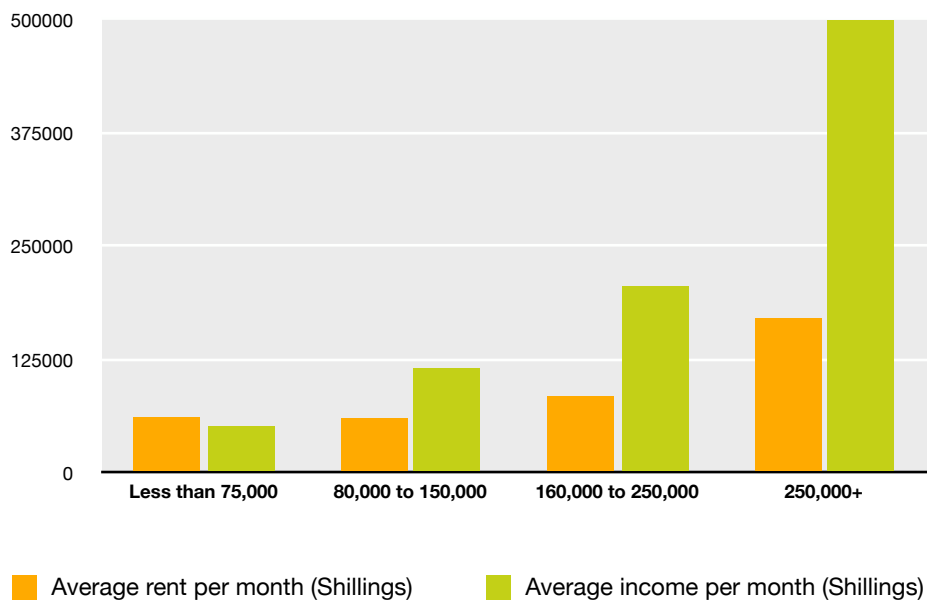


Fig 1g: What is your average rent per month (vs average income per month)



2. Energy poverty

Energy poverty is prevalent in Namuwongo. The average spend per month on energy is 56,446 shillings. Over 20 per cent of participating households struggle to afford energy for lighting (Fig 2a), with a similar number also struggling for the essential activity of cooking (fig 2b). Around 75 per cent of respondents purchase charcoal daily either buying 2000 shilling bags that are about sufficient to cook a family meal or in over 10 per cent of households even less 1000 shilling amounts. Only 23 per cent are able to purchase the larger 60,000 shilling bags of charcoal that provide better value and last for around 4-6 weeks. The average monthly spend on energy per income group (Fig 2g) reveals that energy incorporates a large part of household budgets especially amongst the lower income groups. The under 75,000 shillings a month households spending on average 45,150 shillings per month on energy, the 80,000 to 150,00 shillings a month households spending 45,227 shillings, the 160,000 to 250,000 shillings a month households spending 48,042 shillings and the 250,000+ shillings a month spending on average 88,242 shillings.

Over 95 per cent of households in the survey agree that energy is getting more expensive (Fig 2e) and is a serious burden to household finances (Fig 2e) and that residents in Namuwongo struggle with the costs of energy in daily life (Fig 2j) and that energy is too expensive for the poor in Uganda (Fig 2h). Only 19 per cent agree that access to electricity should only be for those who afford it (Fig 2i).

Fig 2a: Can you always afford energy for lighting?

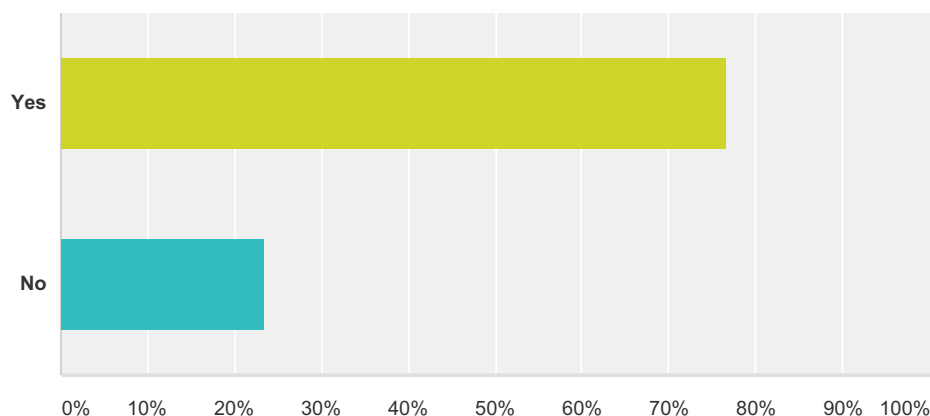
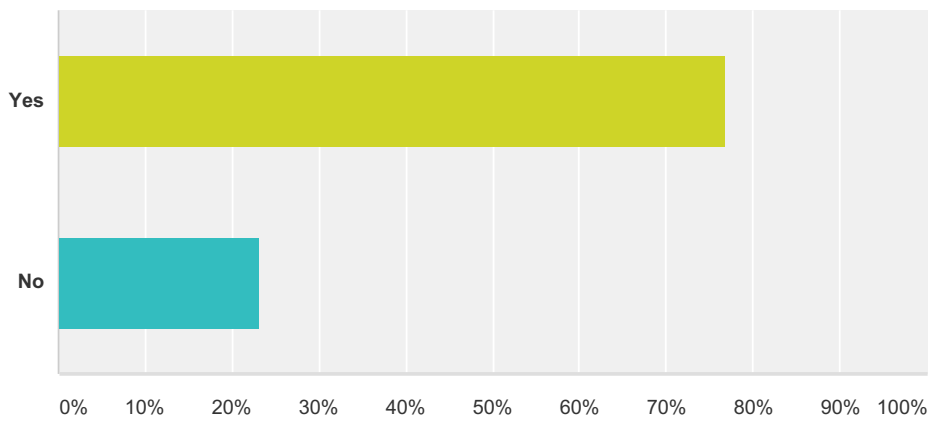


Fig 2b: Can you always afford to cook?



Impact of lack of energy for cooking or lighting

“we can not afford medical bills because all the money is use on energy”
“the children can't read at night”
“we go hungry”
“borrowing always”
“I get so scared when it get dark”
“Use paraffin which produces smoke most time”

“Impact of no energy for cooking”
“children of empty stomach suffer at school”
“end up cooking once a day”
“buying it on credit always”
“by using other mean which brings lots of smoke”
“hunger”

Fig 2c: If you buy charcoal how much do you buy?

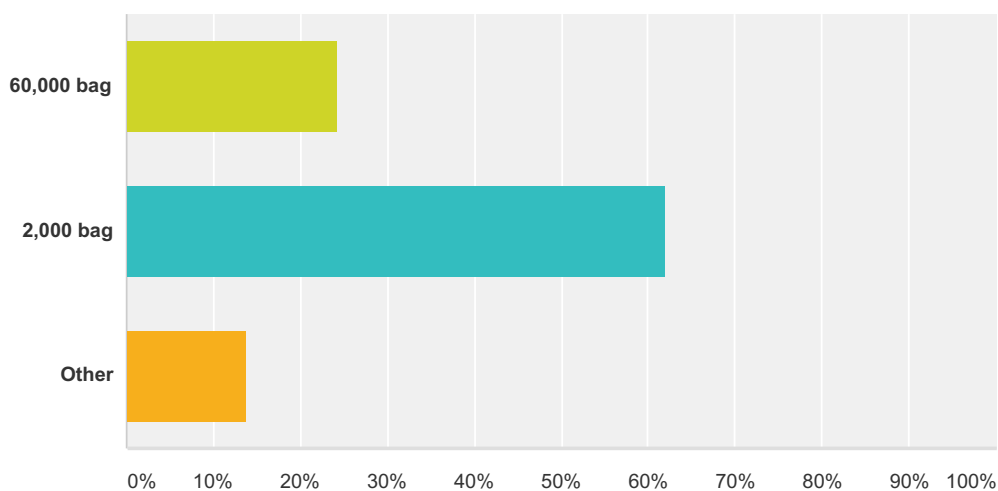


Fig 2d: Do you find the cost of each source...? (%)

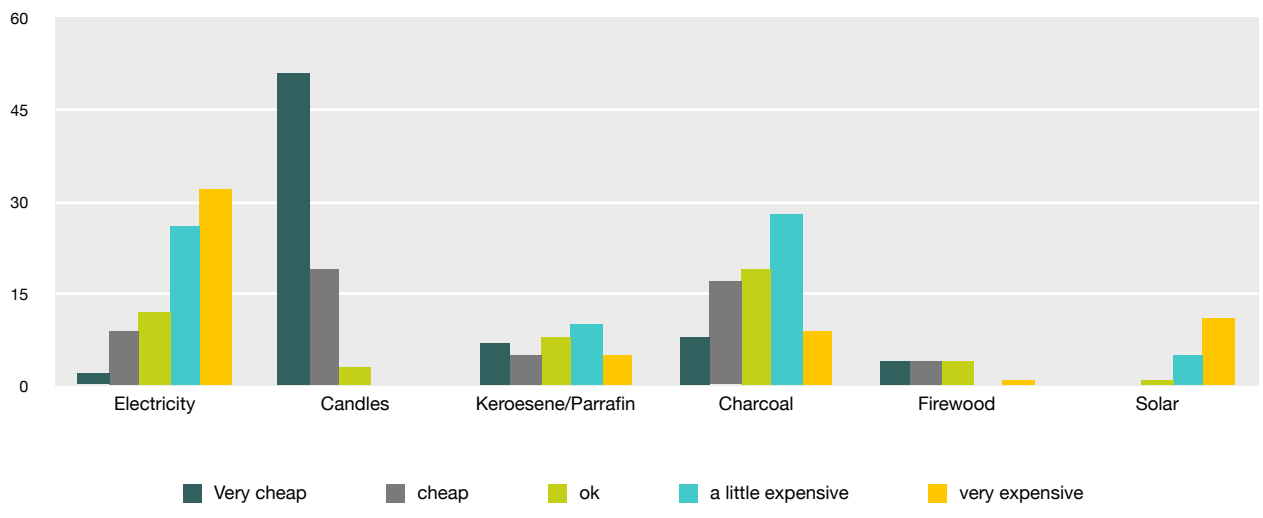


Fig 2e: Energy is getting more expensive? (%)

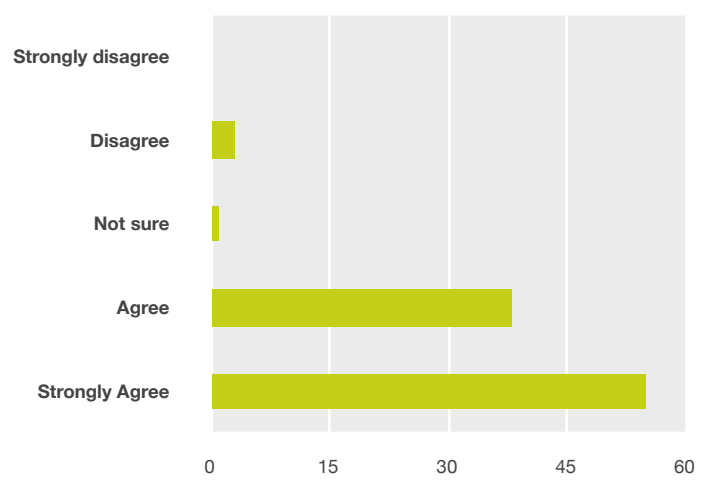


Fig 2f: The cost of energy is a serious burden for my household? (%)

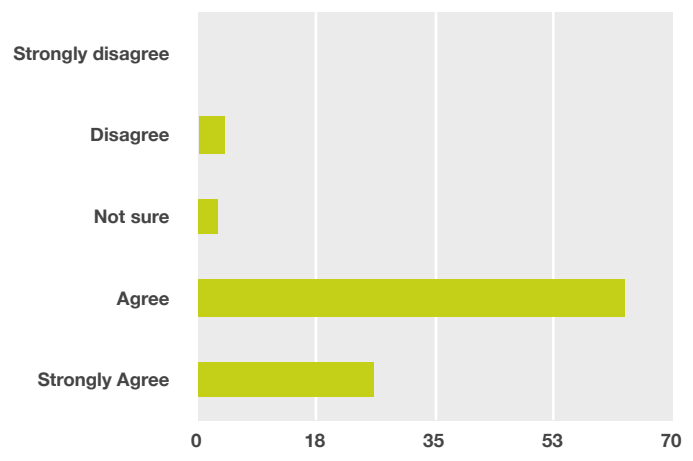


Fig 2g: Average monthly spend on energy per monthly income group

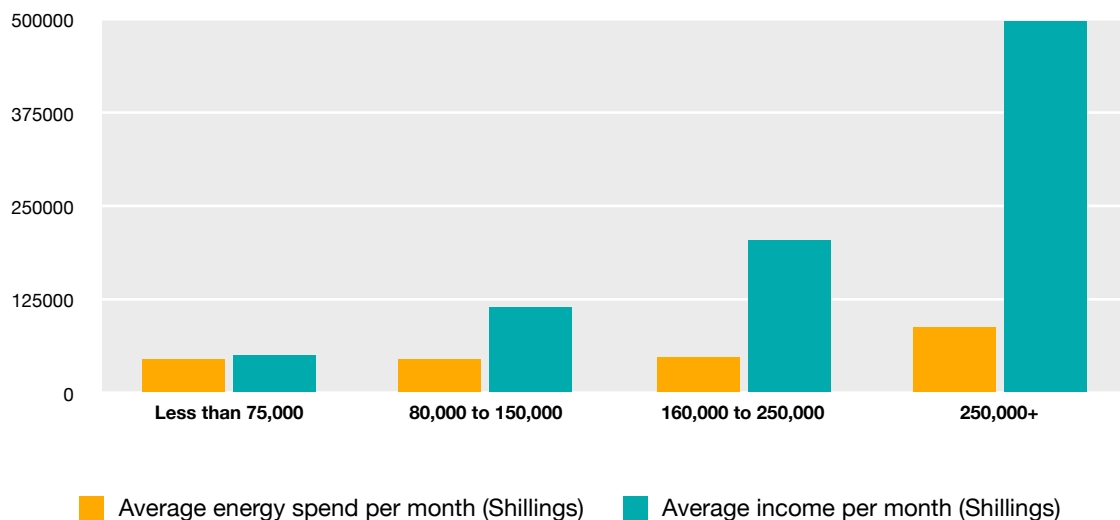


Fig 2h: Electricity is too expensive for the poor in Uganda? (%)

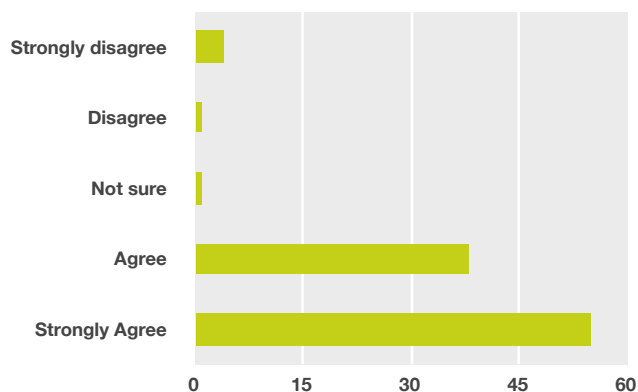


Fig 2i: Access to electricity should be only for those who can afford it? (%)

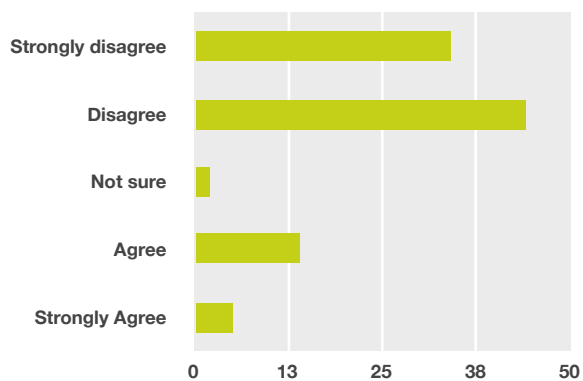
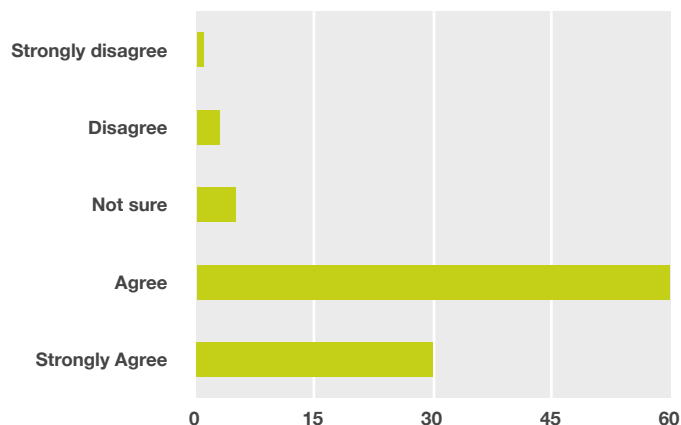


Fig 2j: Residents in Namuwongo struggle with the costs of energy in daily life



3. Energy usage

A range of energy usages are undertaken in Namuwongo using a variety of different energy sources including electricity, candles, gas, kerosene, firewood and plastics. For lighting over 70 percent are using electricity (often in the form on a single lighting point), with over 20 percent using candles in the absence of electricity and a small number of households using kerosene. The main reason for using electricity for lighting is the brightness is brings to the household, whereas candles will be used because there is no electricity available and the energy source is cheap and available. Charcoal is the main fuel source for cooking with nearly 80 per cent of households, a small number using electricity and around 10 per cent using gas. The reasons for using charcoal are many including; cheapness, availability, ease of use, convenience and long lasting. Gas is used because it is clean energy source and it does not smoke. Around 60 per cent of respondent households are aware that using charcoal for cooking is bad for Uganda’s environment.

Fig 3a: What is your main energy sources for lighting?

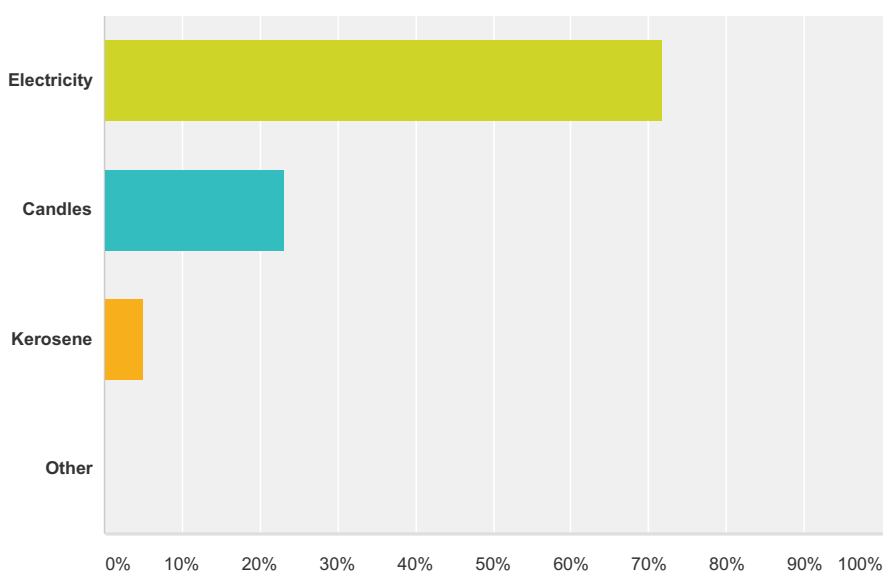


Fig 3b: Reasons for energy source used for lighting

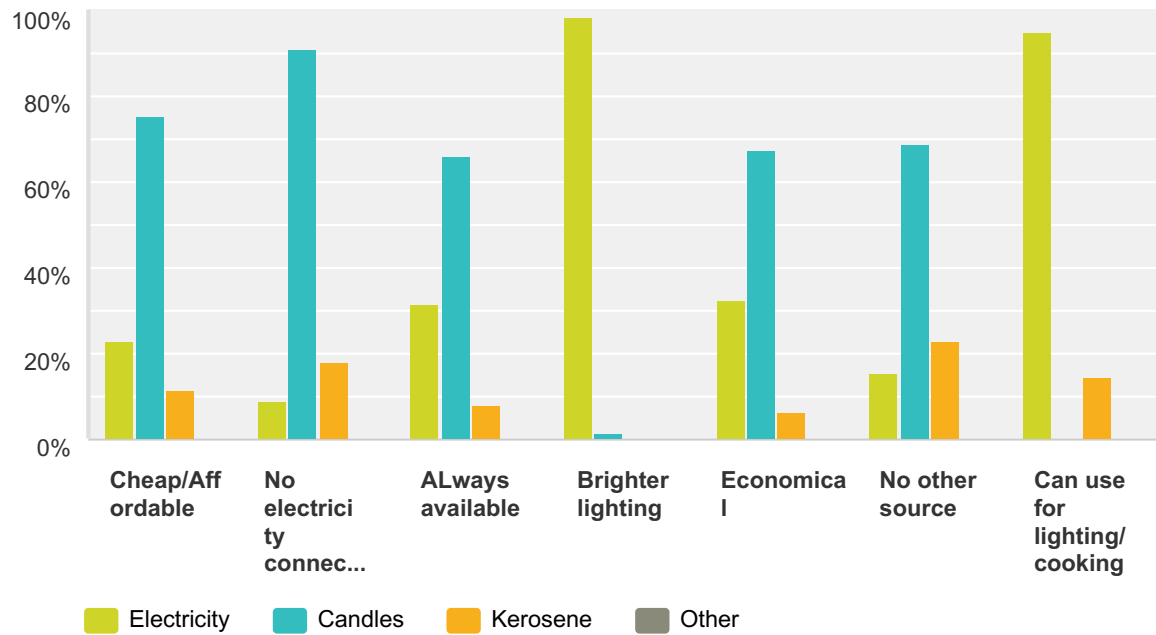


Fig 3c: What is your main energy sources for cooking?

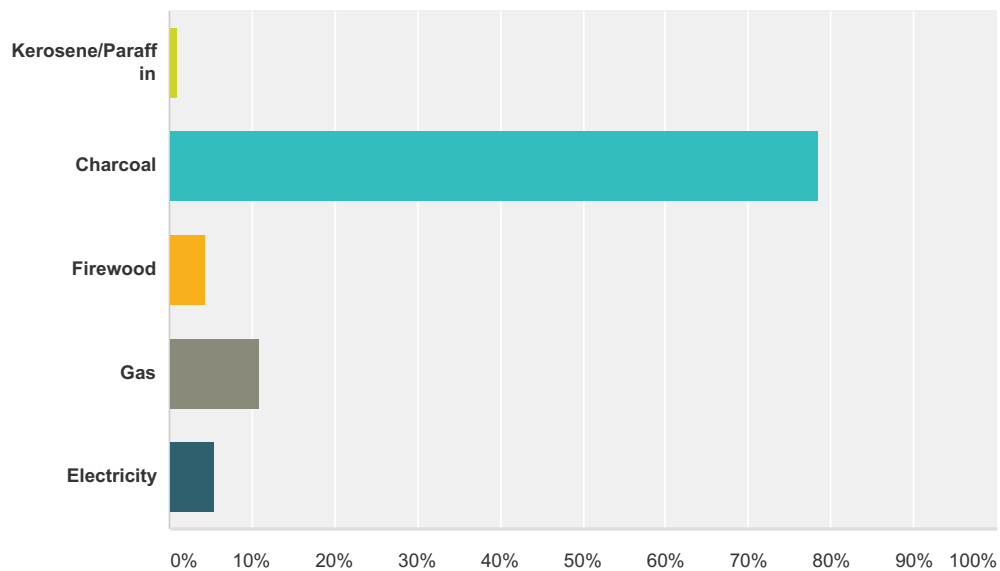


Fig 3d: Reasons for energy source used for cooking?

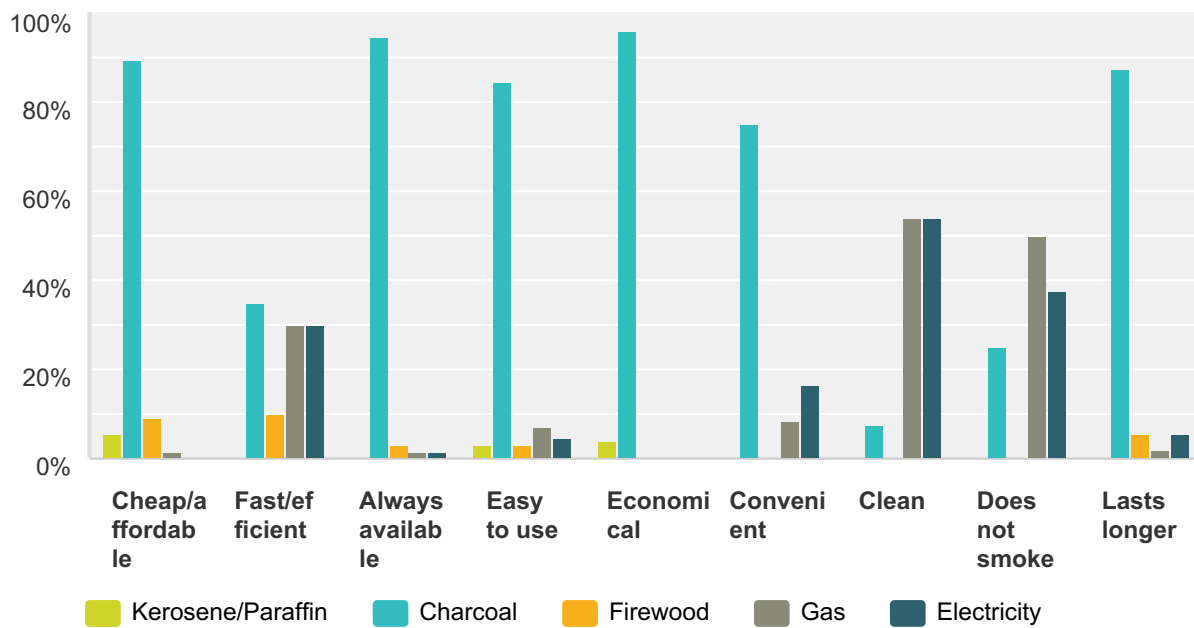
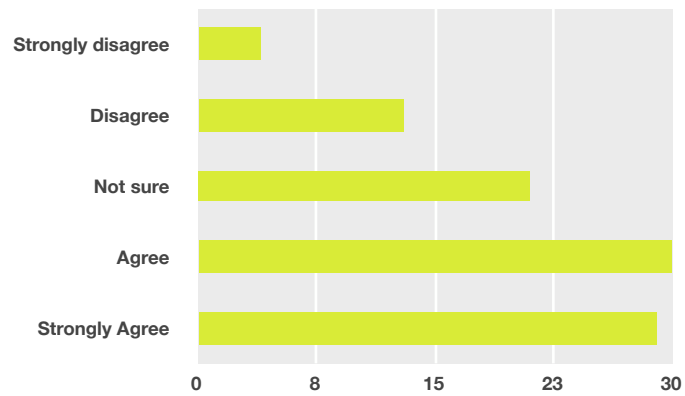


Figure 3e: Using charcoal is bad for Uganda's environment? (%)



4. Electricity

Electrification rates in the participating households is just over 70 per cent (Fig 4a) with it being supplied through a variety of different means (Fig 4b) but dominated by either official connections from UMEME (48 per cent) or from an informal connection from the households landlord (41 per cent). The main problems associated with electricity usage (Fig 4c) are affordability (60 per cent) and power failure (60 per cent), with nearly 80 per cent of households agreeing this is a wider community problem in Namuwongo (Fig 4d). In the context of wide spread poverty around 50 per cent of participant households (Fig 4e)

4a: Are you electrified?

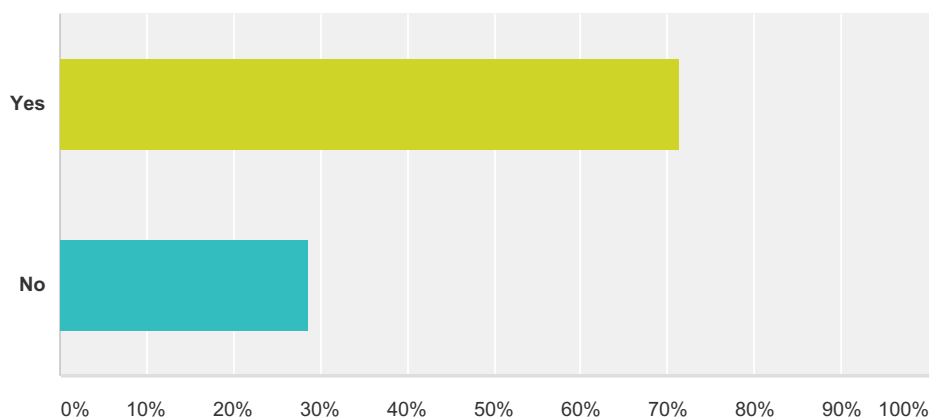


Fig 4b: How do you get your electricity?

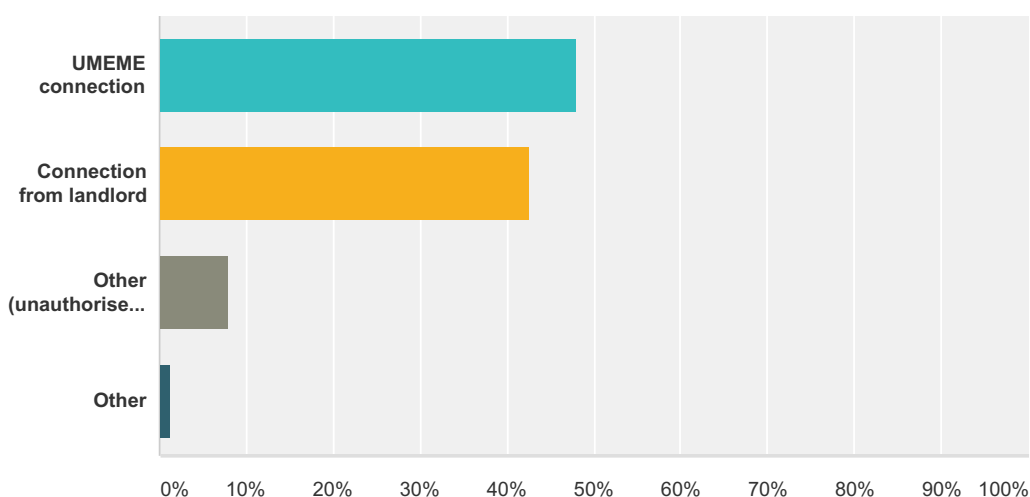


Fig 4c: What problems do you have with your electricity supply?

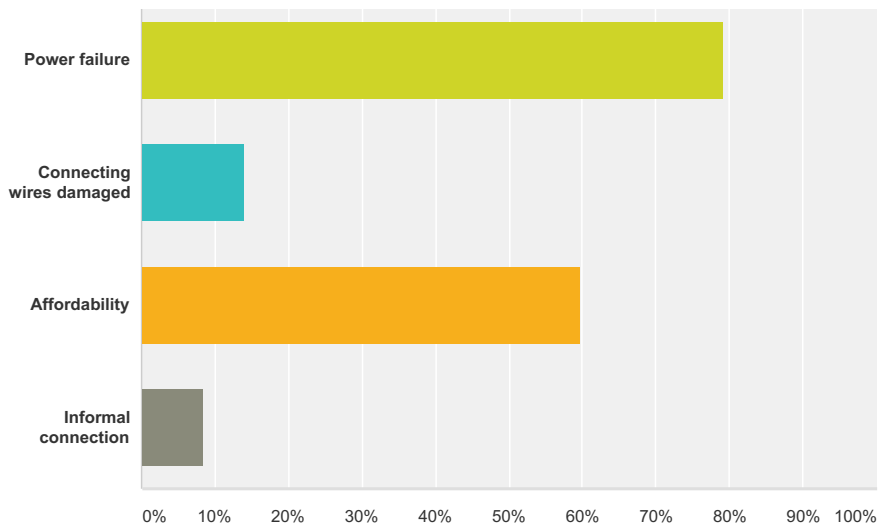
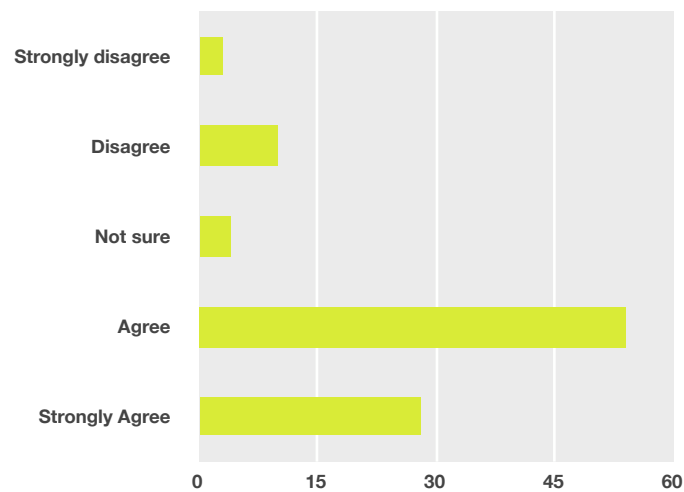


Fig 4d: Power failure is a big problem for using electricity in Namuwongo? (%)



Coping with disrupted electricity supply...

“buy candles, question the landlord, send voices to UMEME thru our leaders “

“we use candle“

“call the landlord“

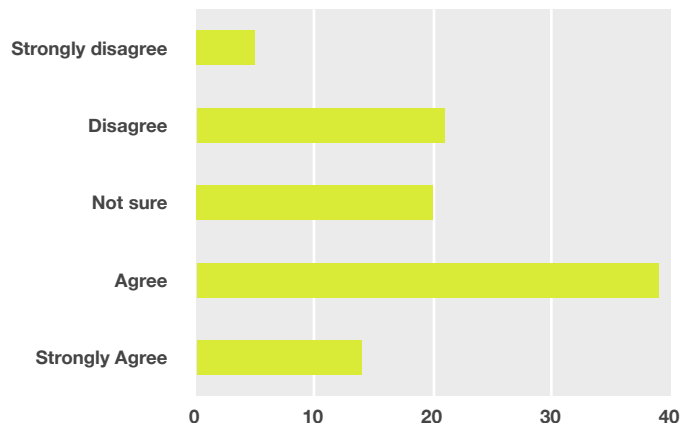
“I charge my lantern and use it or use battery torches at night

“by using other available sources that are affordable“

“some use lantern and others use solar“

“sit back and relax till its connected back again“

Fig 4e: It is ok for poor people to avoid paying for electricity? (%)



5. Pre-Paid Meters (PPM)

The emergence of PPM in Namuwongo is recorded in the survey with 20 per cent of households now having such technology (Fig 5a). Nearly 50 per cent of total participating households would prefer a PPM with over 20 per cent not sure (Fig 5b). Of those households with PPM technology 88 per cent of participants do not prefer this technology to the older post paid system (Fig 5c).

Fig 5a: Do you have pre-paid meter?

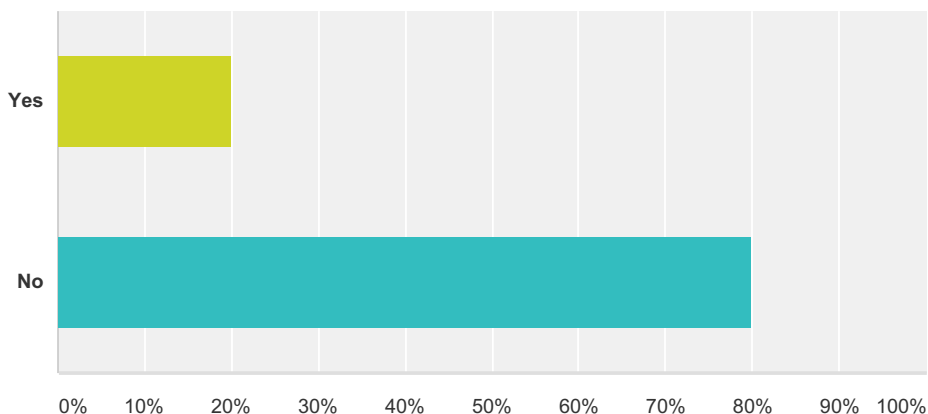


Fig 5b: Would you prefer to pay for pre-paid electricity from UMEME through a meter? (All)

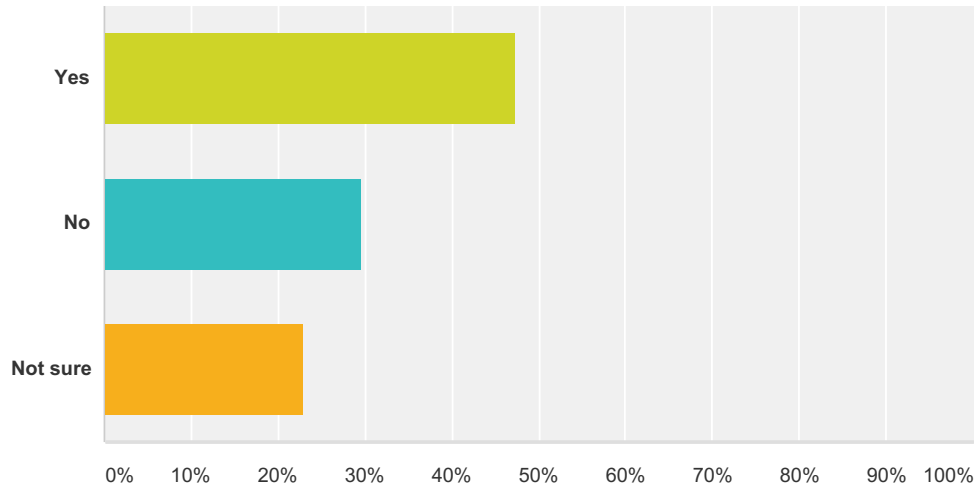


Fig 5c: Do you prefer the pre-paid meter? (Households with PPM)?

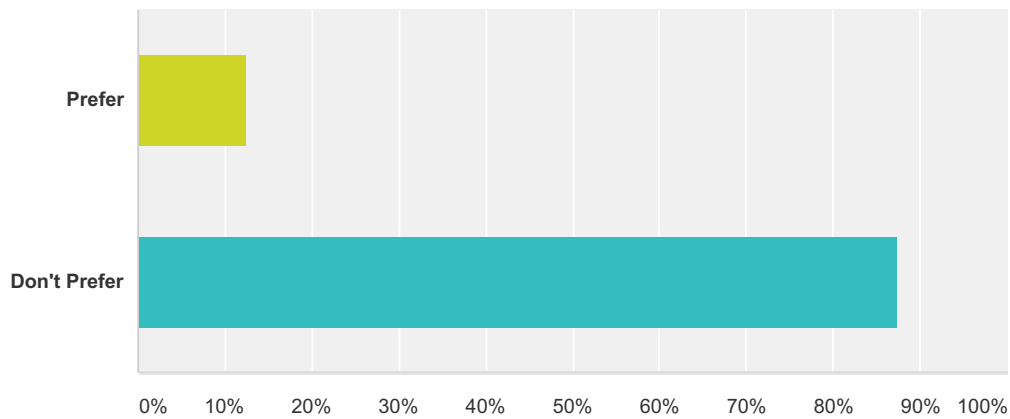
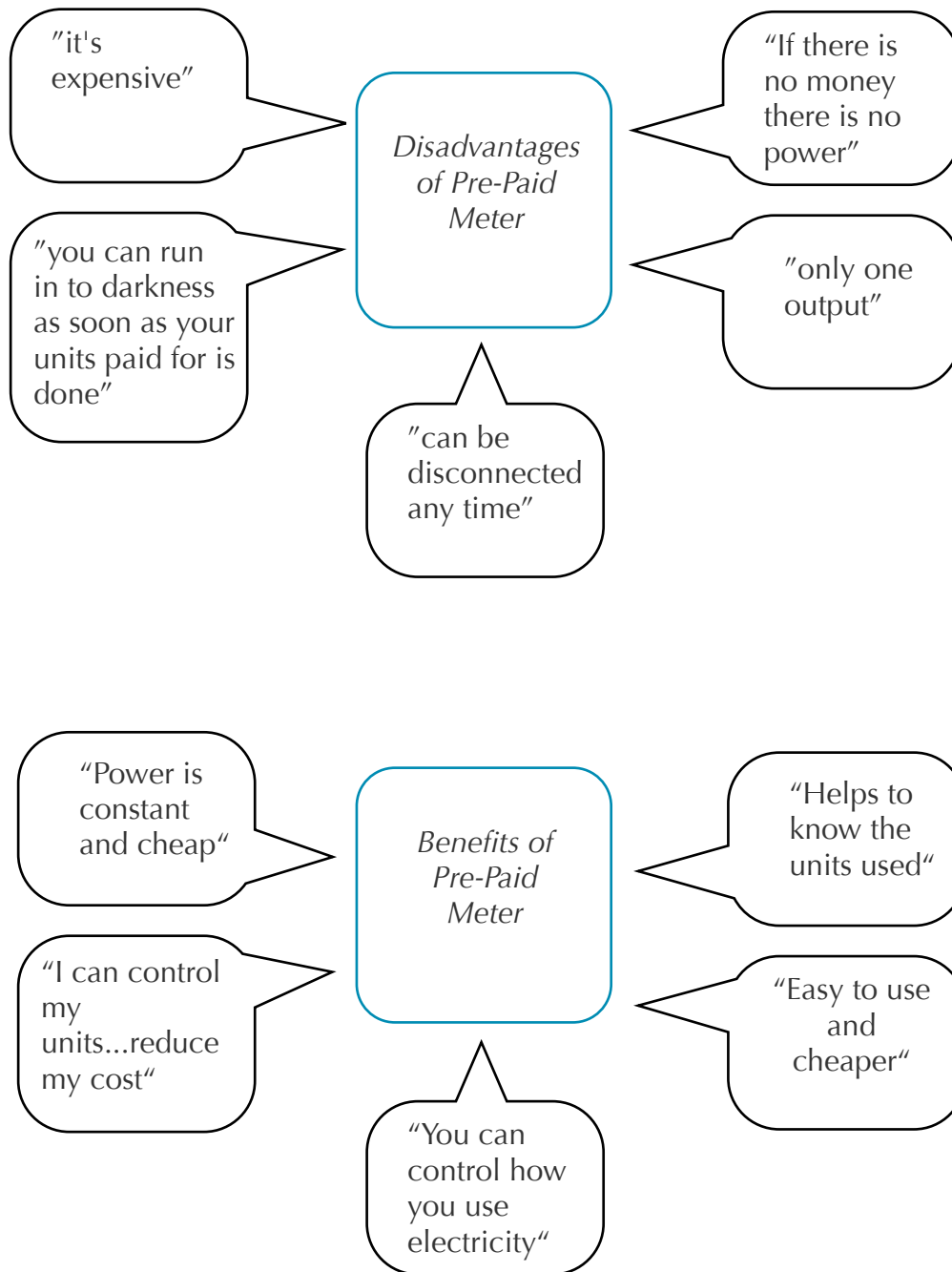


Fig 5d: What are benefits/disadvantages of Pre-Paid Meters?



6. Health and safety

There are limited number of health problems associated with energy in Namuwongo. Around 15 per cent of respondent households acknowledged such health problems (Fig 6a) with 30 per cent knowing of accidents involving energy (Fig 6b), mainly due to issues with electricity. All respondents agreed that lack of lighting outside their housing would contribute to feeling unsafe (Fig 6c).

Fig 6a: Do you have any health problems associated with your energy sources?

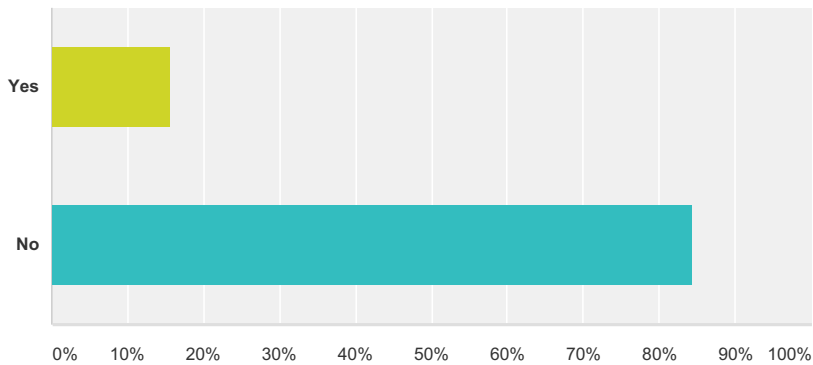


Fig 6b: Do you know of anyone who has had an accident because of energy?

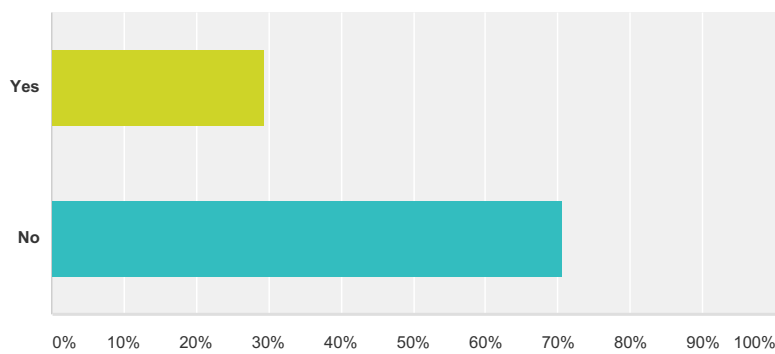
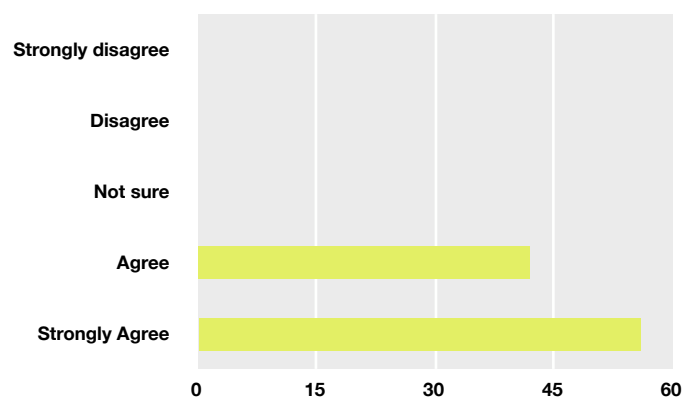
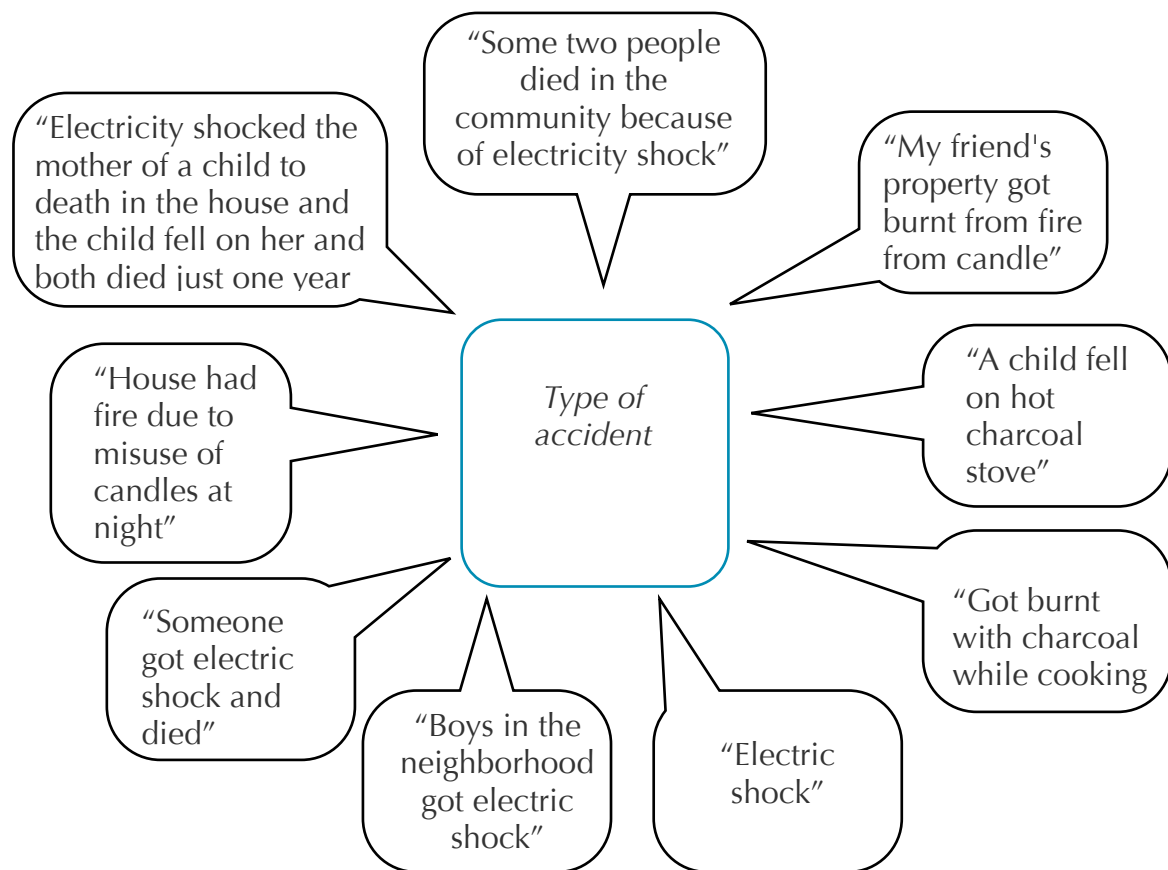


Fig 6c: I feel unsafe without lighting outside my home? (%)





7. Energy Futures

When considering the energy futures of Namuwongo over 95 per cent of participant households agree that it is the responsibility of the government to provide electrification in the area to make sure people get connected (Fig 7a). Over 50 per cent (Fig 7b) would like to see community owned energy generation and nearly all (Fig 7c) would like to see extensive public lighting across the neighbourhood. Residents provided a range of potential energy efficiency measures (Fig 7d) from energy saving bulbs to limiting electricity usage through to getting connected to electricity, forgoing using electrical equipment or limited usage of candles at night.

Attitudes to renewable technology (Fig 7e) around 50 to 65 per cent of households aware of different technologies and high usage of clean cooking stoves (over 75 per cent) even if the definition for this could be interpreted in different ways by participants. Solar technologies are evidently seen as too expensive for most households to use and briquettes are viewed by nearly 80 per cent of households as undesirable and not liked. Suggestions for future action on energy include introduction of these technologies, cheaper electricity, free connections, public lighting, regular maintenance (Fig 7g).

Fig 7a: It is the responsibility of the government to make sure people get connected to electricity? (%)

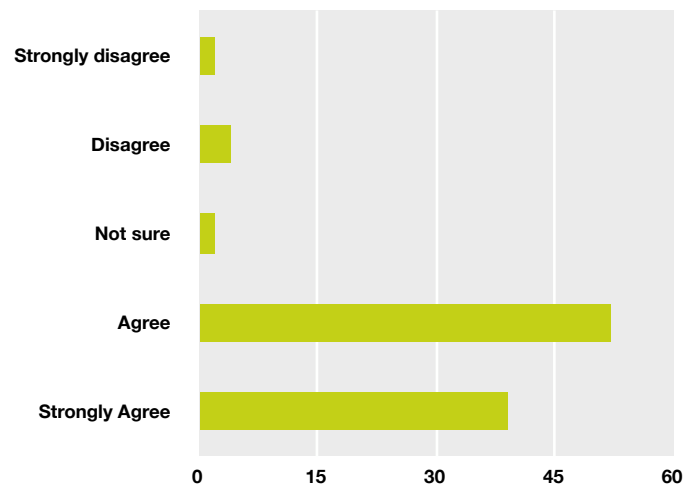


Fig 7b: I would like to see energy generation owned by the community? (%)

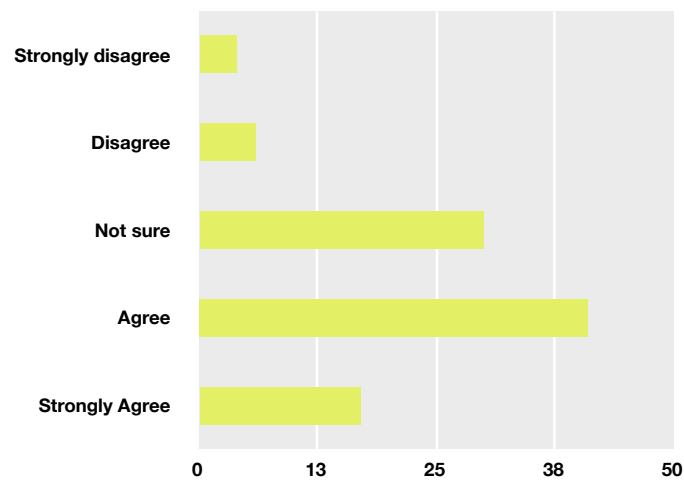


Fig 7c: There should be public lighting covering the whole of Namuwongo? (%)

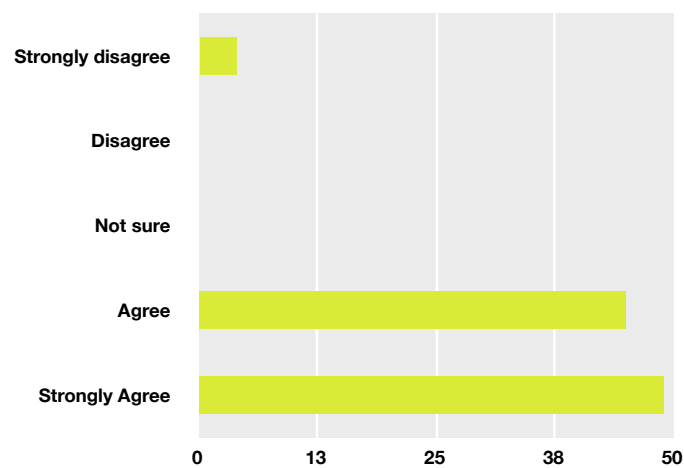


Fig 7d: Energy efficiency measures: how could you reduce the costs of energy?

- “using energy saving bulbs“
- “ using electricity and candle “
- “ by using one candle a night “
- “ restricting the use of electricity for lighting only “
- “ shut off power during day and on at night “
- “ you forego using some electronics “
- “ connecting to electricity “

Fig 7e: Opinions on alternative technology

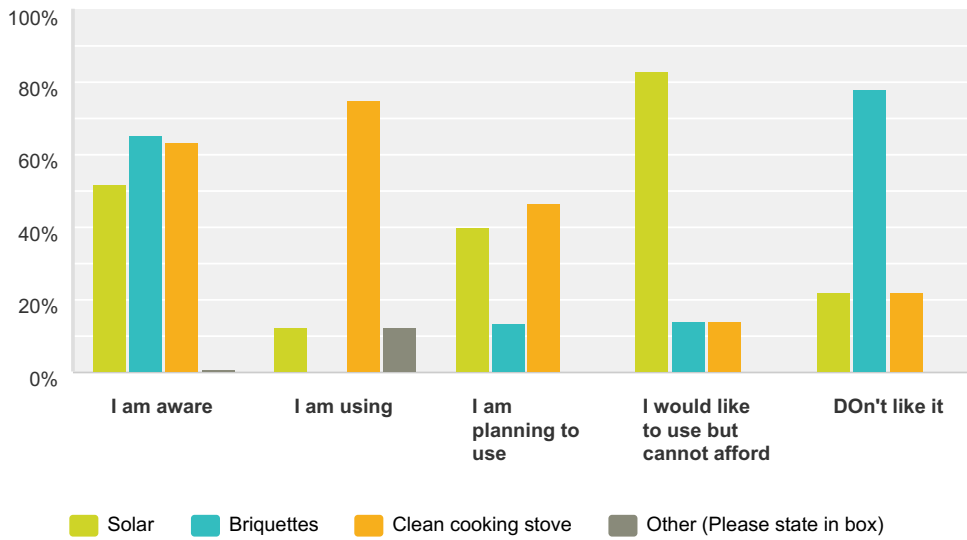


Fig 7f: My household would like to use solar technology but cannot afford it? (%)

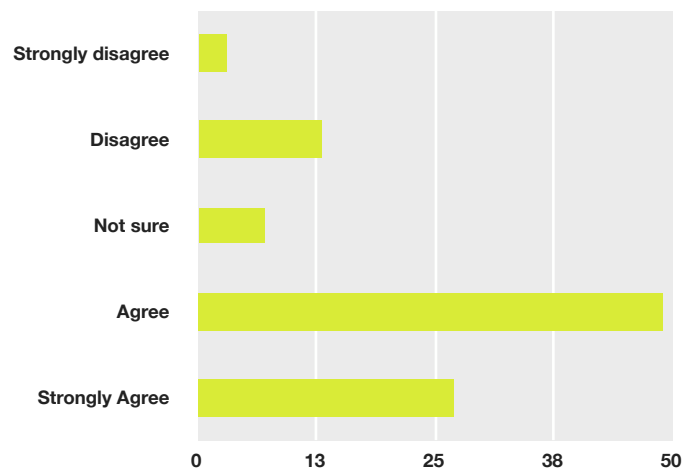


Fig 7g: Future improvements

"Connection should be free"

"Electricity supply should be done by the government like it use to be"

"It's to reduce the energy price"

"There should be constant checking on the poles by UMEME"

"All houses should be connected for free"

"Sensitization of people about briquettes and solar"

"The should provide public lighting"

"Install solar panels and electrification of the whole area"

"Wiring should be improve, there should be constant checking of poles and wires in Namuwongo"

"Avoid future power failure"

"They should install pre paid meter"