

Limited access, connection, and service still leave half of Botswana without reliable electricity

Afrobarometer Dispatch No. 809 | Asafika Mpako and Stephen Ndoma

Summary

Botswana's National Energy Policy (2021) is anchored in three principles: economic development, equity, and environmental protection. In line with the trajectory of sustainable development outlined in the Botswana Vision 2036 and the 11th National Development Plan, the policy is expected to facilitate improved energy-sector governance to spur investment and growth (Government of Botswana, 2021).

The government aims to achieve 100% energy access by 2030 (Energy Catalyst, 2020). The country's overall electrification rate is estimated at 65%, comprising 81% of the urban population and 28% of the rural population (International Renewable Energy Agency, 2021a).

Expanding energy access will be accompanied by a shift from coal-fired power generation to renewable energy sources (World Bank, 2020). Coal is currently the main source of electricity generation in Botswana (ISS African Futures and Innovation, 2023), but the government plans to move toward a greener economy and has set ambitious targets to generate 30% of its energy production from renewable sources by 2030, and 50% by 2036 (African Development Bank, 2023; International Trade Administration, 2024).

Despite immense potential for renewables utilisation, most notably solar, wind, and bioenergy, Botswana's installed renewable energy capacity was only 6 megawatts at the end of 2020, demonstrating that renewable energy penetration remains at very low levels (International Renewable Energy Agency, 2021b). Speaking on the sidelines of the recent Global Citizen Now summit in New York, President Mokgweetsi Masisi reiterated his government's commitment to delivering an effective and efficient clean-energy infrastructure (Molyneaux, 2024).

A 2022 Afrobarometer survey provides an on-the-ground look at electricity access in Botswana. Findings show that while about three-quarters of Botswana live in zones served by the electric grid, only half enjoy a reliable supply of electricity, including roughly one-quarter of rural residents. A majority of citizens say the government is doing a good job of providing electricity, although this share is down compared to the previous Afrobarometer survey in 2019.

Afrobarometer surveys

Afrobarometer is a pan-African, non-partisan survey research network that provides reliable data on African experiences and evaluations of democracy, governance, and quality of life. Nine survey rounds in up to 42 countries have been completed since 1999. Round 9 surveys (2021/2023) cover 39 countries. Afrobarometer's national partners conduct face-to-face interviews in the language of the respondent's choice.

The Afrobarometer team in Botswana, led by Star Awards, interviewed a nationally representative, random, stratified probability sample of 1,200 adult Botswana in July-August 2022. A sample of this size yields country-level results with a margin of error of +/-3

percentage points at a 95% confidence level. Previous Afrobarometer surveys were conducted in 1999, 2003, 2005, 2008, 2012, 2014, 2017, and 2019. Surveys are conducted in English and Setswana.

Key findings

- About three-quarters (76%) of Botswana live in zones served by the national electric grid.
 - Only 35% of rural residents are within reach of the grid, compared to 100% of urban residents. More educated and economically better-off citizens are also far more likely to live in zones served by the electric grid than those with less schooling and lower economic status.
- More than six in 10 Botswana (64%) live in households that are connected to the national power grid.
- Among those who are connected to the grid, 76% say their electricity works “most of the time” or “all of the time.”
- Combining connection and reliability rates shows that half (49%) of all Botswana say they enjoy a reliable supply of electricity, including just 23% of rural residents and 32% of citizens experiencing high lived poverty.
- Electricity ranks far down the list of most important problems that Botswana want their government to address, cited by just 1% of respondents as one of their top three priorities for government action.
- Nearly two-thirds (64%) of citizens say the government is doing a good job of providing a reliable supply of electricity, although this is down from 77% in 2019.

Access to the electric grid

For most households, having access to an electricity grid will remain a prerequisite for obtaining power until alternative energy resources become more widely available.

According to Afrobarometer's 2022 survey in Botswana, about three-quarters (76%) of citizens live in areas served by an electricity grid (Figure 1).¹

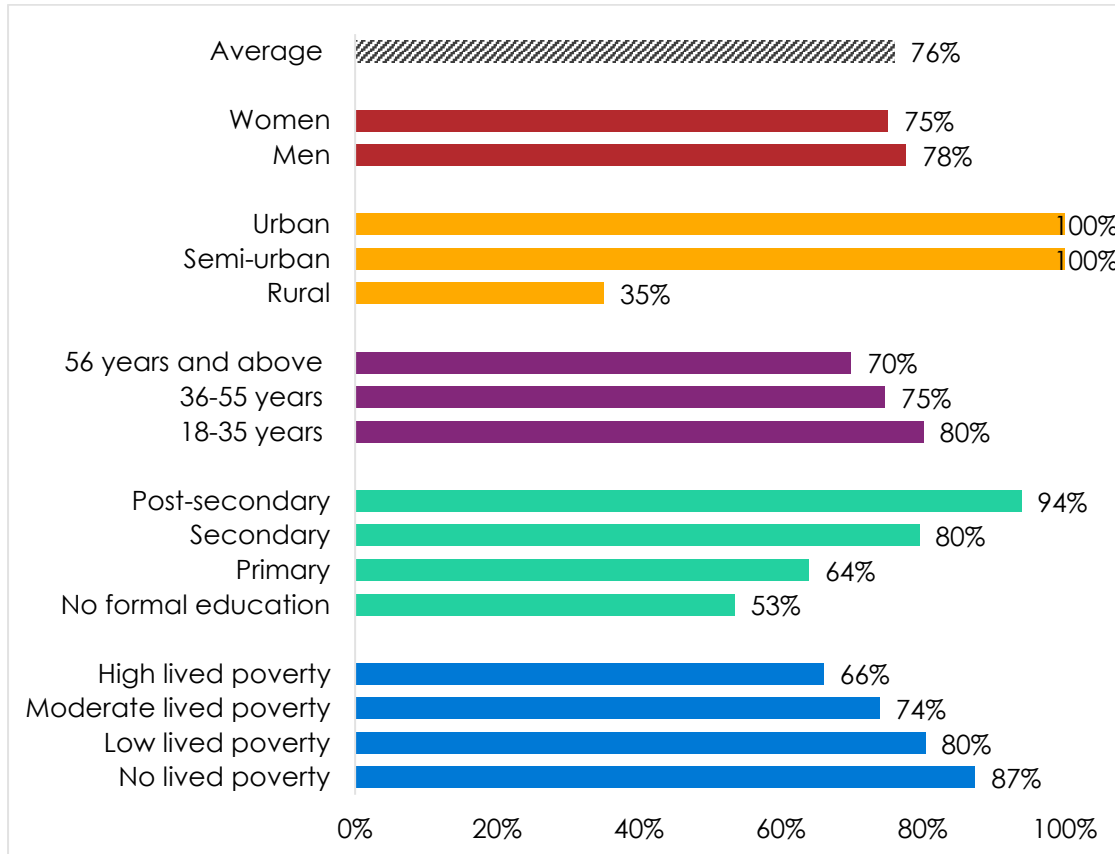
But the presence of the electric grid is far more limited in rural areas: Only 35% of rural residents live within reach of the grid. In contrast, 100% of residents in urban and semi-urban areas live in zones served by the electric grid. Citizens who are economically well off² (87%), those with post-secondary qualifications (94%), and youth (80% of those aged 18-35 years)

¹ Afrobarometer samples are based on a selection of enumeration areas (EAs) drawn randomly from the national census frame. Eight interviews are conducted in each selected EA, so interview teams usually visit about 150 EAs (for surveys with n=1,200). In each EA, the team records the presence or absence of basic services (such as electricity supply) and infrastructure (such as schools). Because of the smaller sample sizes, the margin of error on the figure reported here for presence of an electric grid is higher than for findings captured in individual interviews.

² Afrobarometer's Lived Poverty Index (LPI) measures respondents' levels of material deprivation by asking how often they or their families went without basic necessities (enough food, enough water, medical care, enough cooking fuel, and a cash income) during the preceding year. For more on lived poverty, see Mattes and Patel (2022).

are more likely to live in zones served by an electricity grid than poorer, less educated, and older respondents.

Figure 1: Presence of electricity grid | by demographic group | Botswana | 2022



Survey enumerators were asked to record: Are the following services present in the primary sampling unit/enumeration area: Electricity grid that most houses can access? (% "yes")

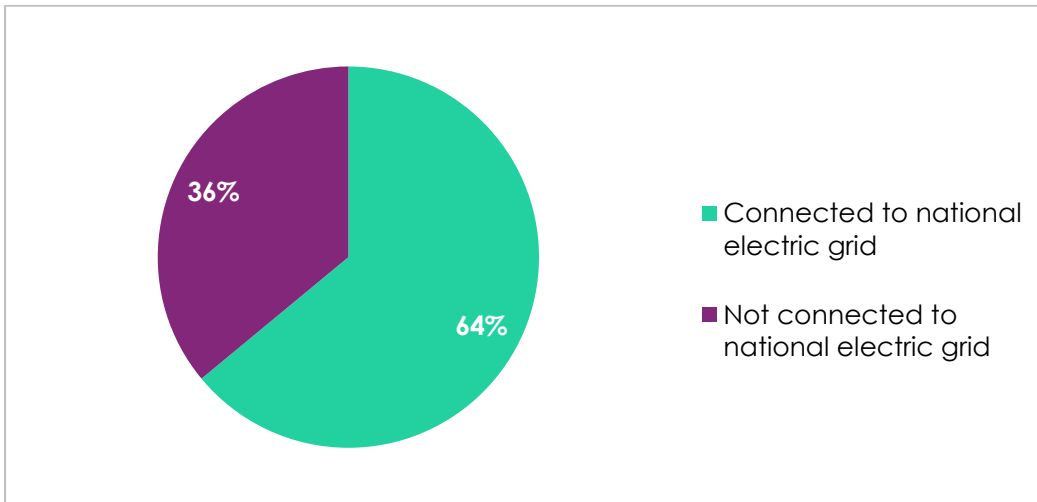
Connection to the electric grid

Living in a zone served by an electricity grid does not, of course, guarantee a supply of electricity. Costs associated with service from the power grid – including fees for inspection, house wiring, and connection – may present prohibitive hurdles for many citizens.

How many Botswana are actually connected to the national grid?

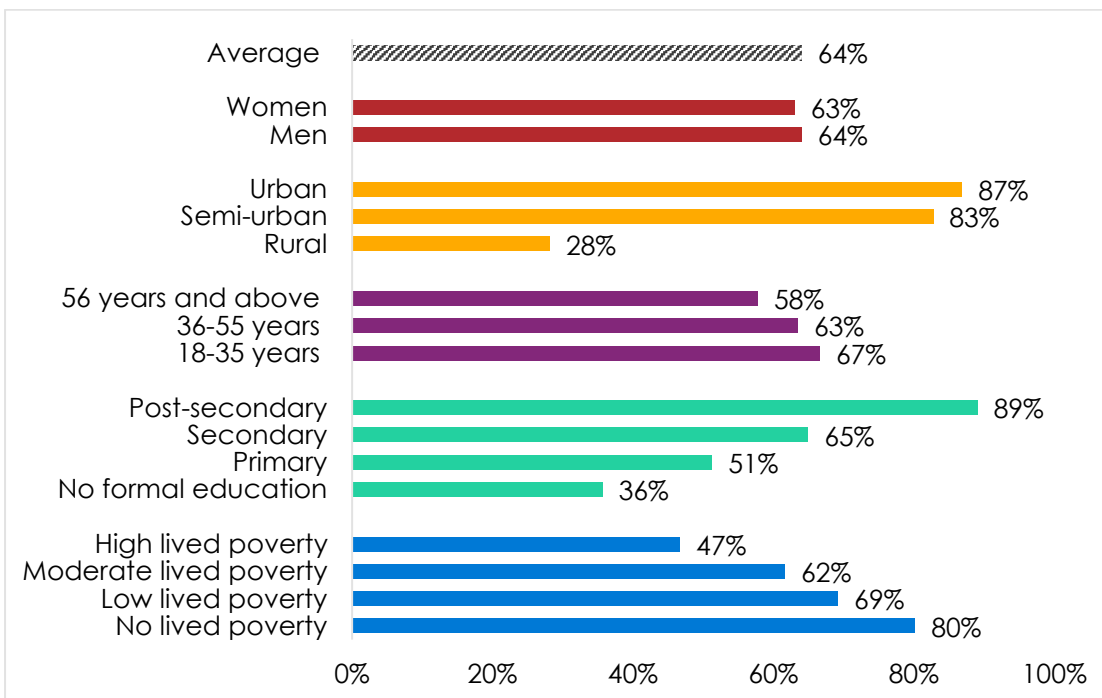
Almost two-thirds of citizens (64%) report that their households are connected to the electric grid (Figure 2). As might be expected, urbanities (87%) are far more likely to be connected to the power grid than rural residents (28%) (Figure 3). Connections increase sharply with respondents' economic status, ranging from 47% of the poorest to 80% of the wealthy, and with education level, from 36% of those with no formal schooling to 89% of those with post-secondary qualifications. Youth are also more likely to be connected (67% of those aged 18-35 years) than their elders (58%-63%).

Figure 2: Connection to the national electric grid | Botswana | 2022



Respondents were asked: Do you have an electric connection to your home from the Botswana Power Corporation?

Figure 3: Connection to the national electric grid | by demographic group | Botswana | 2022



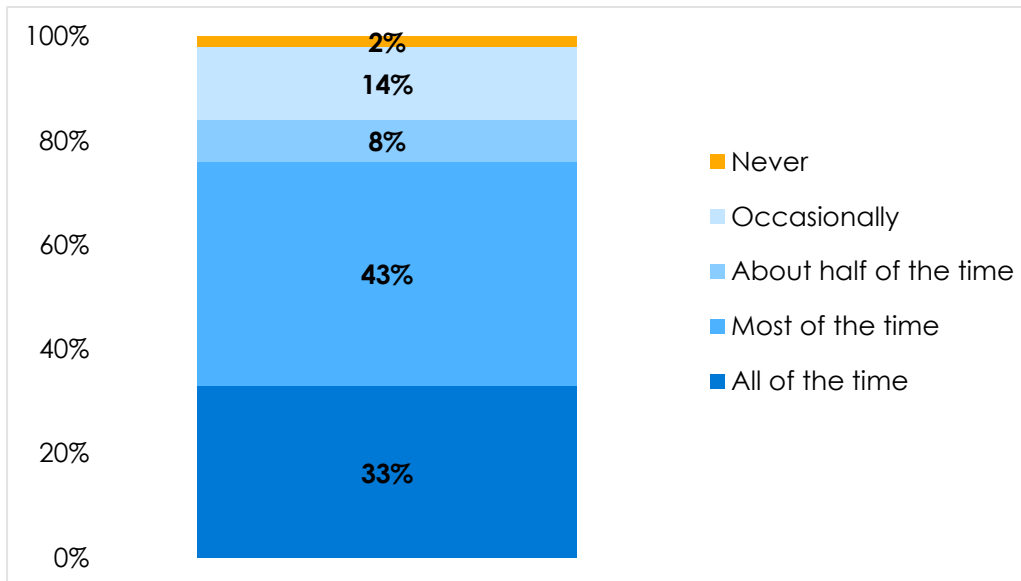
Respondents were asked: Do you have an electric connection to your home from the Botswana Power Corporation? (% "yes")

Reliable supply of electricity

Even if houses are connected to an electric grid, the reliability of their power supply may be poor. How many Botswana actually have reliable electricity?

Among citizens who report being connected to the power grid, about three-quarters (76%) say that their electricity works "most of the time" (43%) or "all of the time" (33%) (Figure 4). About one-quarter (24%) say that power is available only "about half of the time" or less.

Figure 4: How often is electricity available? | among households connected to the grid | Botswana | 2022



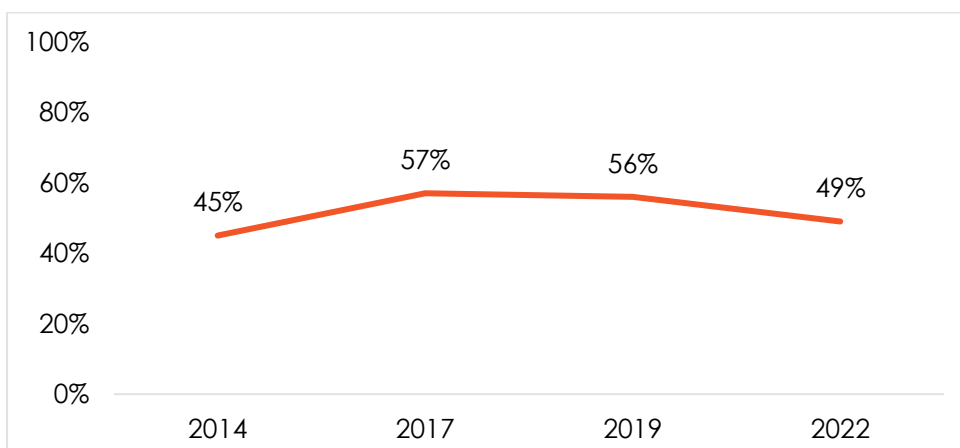
Respondents who said they have a connection to the national electric grid were asked: How often is electricity actually available from this connection? (Respondents without a connection to the national grid are excluded.)

Looking at the entire population (rather than only those who are connected to the grid), we see that about half (49%) of Botswana report having electricity from the national grid that works “most” or “all” of the time. After increasing by 12 percentage points between 2014 and 2017, the share of households with reliable electricity has since declined by 8 points (Figure 5).

Among the poorest respondents, only 32% say they have reliable electricity, compared to 63% of those experiencing no lived poverty (Figure 6).

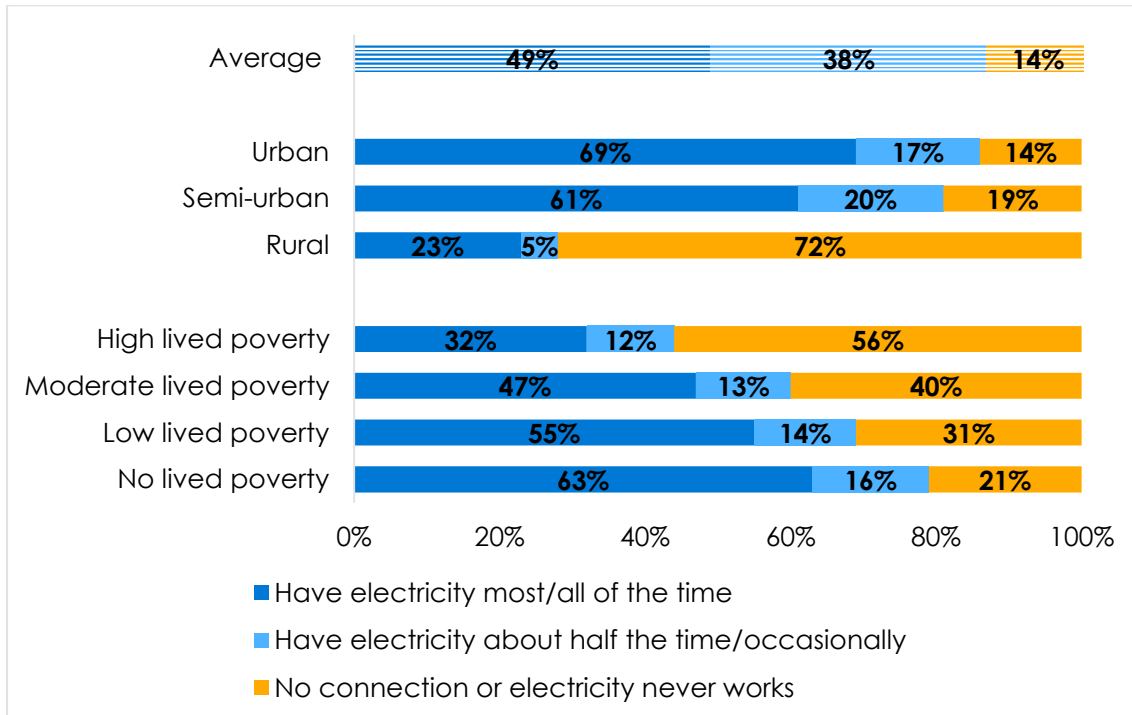
And in rural areas, only 23% of citizens enjoy a reliable supply of electricity, vs. 69% of urban residents.

Figure 5: How many citizens have reliable electricity? | Botswana | 2014-2022



Respondents were asked: Do you have an electric connection to your home from the Botswana Power Corporation? (If “yes”:) How often is electricity actually available from this connection? (% who say “most of the time” or “all of the time”)

Figure 6: How many citizens have reliable electricity? | by urban-rural location and lived poverty | Botswana | 2022



Respondents were asked: Do you have an electric connection to your home from the Botswana Power Corporation? (If “yes”:) How often is electricity actually available from this connection?

Priorities and government performance

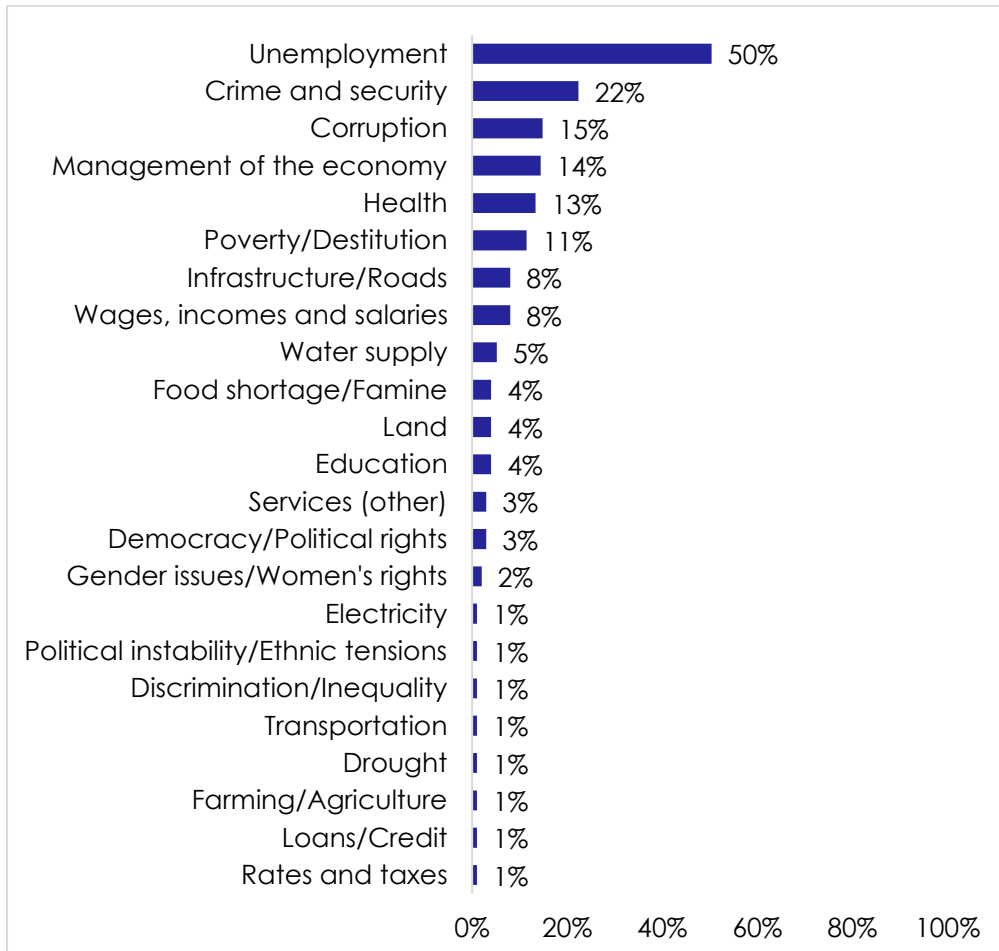
On citizens' list of most important problems that their government should address, electricity ranked far down the list as of July-August 2022 – only 1% of respondents cited it among their top three priorities for government action. Unemployment was far and away the top concern for urgent government action, cited by 50% of citizens (Figure 7).

Almost two-thirds (64%) of Botswana say the government is doing a “fairly good” or “very good” job of providing a reliable electricity supply, although this is down from 77% in 2019 (Figure 8).

The poor (50%) are more likely than the wealthy (24%) to disapprove of the government's efforts on electricity (Figure 9).

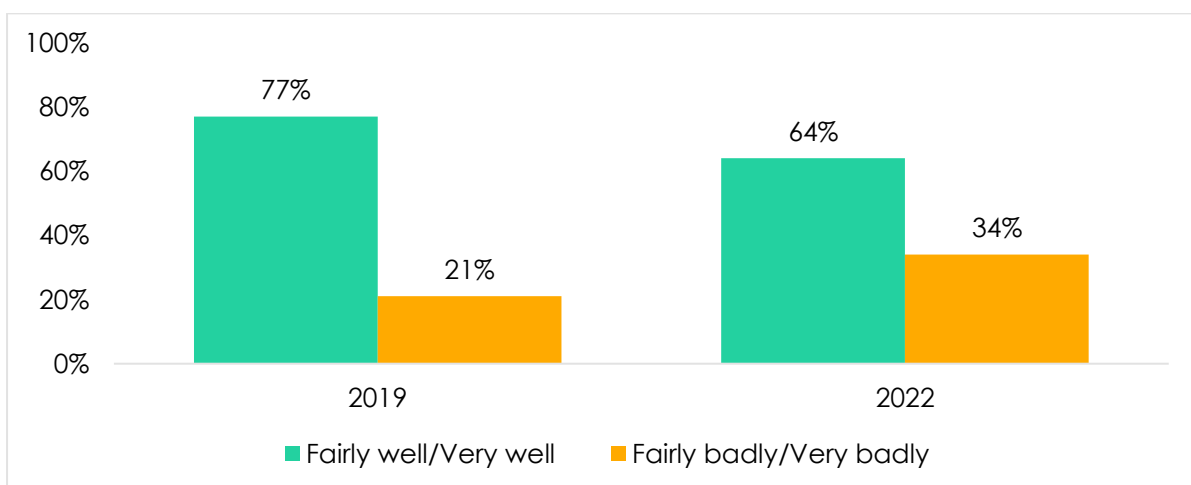
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Figure 7: Most important problems | Botswana | 2022



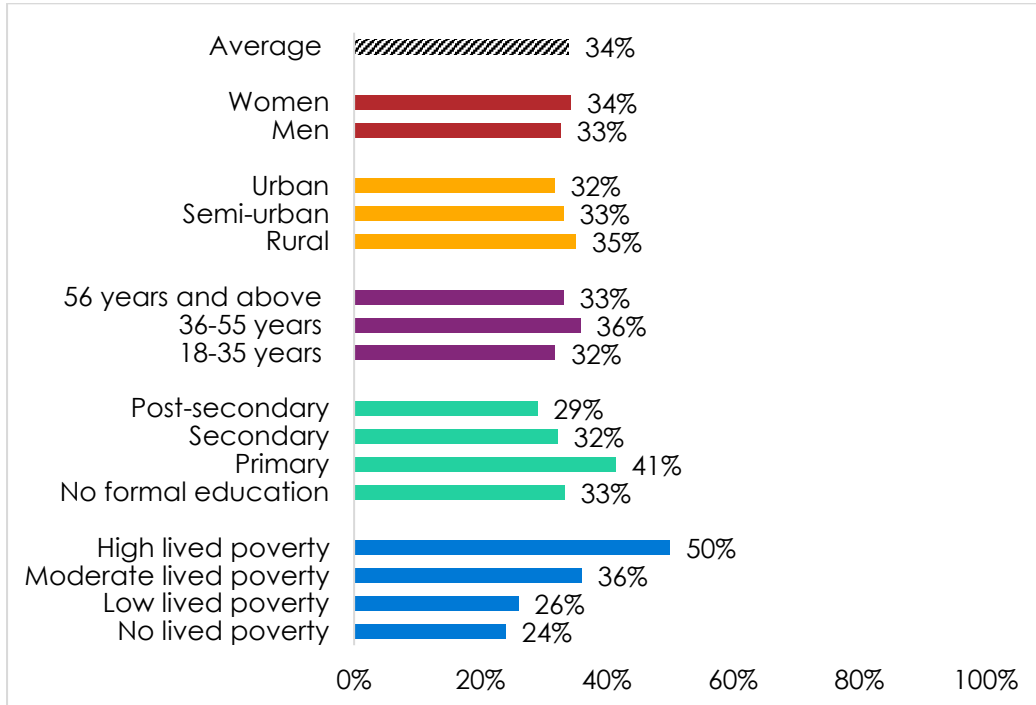
Respondents were asked: In your opinion, what are the most important problems facing this country that government should address? (Up to three responses per person; figure shows percentage of respondents who cite each problem as one of up to three priorities.)

Figure 8: Government performance in provision of reliable electricity supply | Botswana | 2019-2022



Respondents were asked: How well or badly would you say the current government is handling the following matters, or haven't you heard enough to say: Providing a reliable supply of electricity?

Figure 9: Government is performing badly in the provision of reliable electricity supply | Botswana | 2022



Respondents were asked: How well or badly would you say the current government is handling the following matters, or haven't you heard enough to say: Providing a reliable supply of electricity? (% who say "fairly badly" or "very badly")

Conclusion

Access and connection to the national power grid remain limited in Botswana. Survey findings show that only half of citizens enjoy a reliable supply of electricity, and rural residents and the poor are particularly disadvantaged. A majority of citizens say the government is doing a good job of providing a reliable supply of electricity, but this share has dropped since 2019, pointing to the need to promote development by improving service reliability and expanding access to electricity, especially for poor and rural communities.

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Asafika Mpako is Afrobarometer's communications coordinator for Southern Africa. Email: ampako@afrobarometer.org.

Stephen Ndoma is Afrobarometer's assistant project manager for Southern Africa. Email: ndomashe@gmail.com.

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