

How does access to electricity impact citizens in Kenya?

Over the past decade, access to electricity in Kenya has increased rapidly. As a result, it currently has one of the highest levels of electricity access in Africa. However, because of high costs and unreliable supply, many households continue to struggle to meet their daily energy needs. A team of researchers from Kenya, Canada and the USA is exploring the economic, social and political impacts of electricity access. Their research examines how the quality and quantity of electricity affects households, as well as the challenges in distributing electricity equitably across Kenya.



Team members

Dr Elizabeth Baldwin
Dr Jennifer Brass
Dr Christopher Gore
Dr Lauren MacLean
Dr Winnie Mitullah
Dr Alesha Porisky

Fields of research

Political science, public policy,
environmental studies

Research project

Investigating the social, economic and political impacts of electricity access in Kenya

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Glossary

Blackout — a power cut

Energy justice — equal access to reliable, affordable electricity for all

Grid — the national network of infrastructure that delivers electricity to consumers

Kerosene — a liquid fuel, commonly used for lighting in many low-income African countries

Political participation — engagement in any politically related activities, such as voting, campaigning, attending meetings and discussing politics

Most of us take electricity for granted. If we want to turn on a light or watch TV, we simply flick a switch. If we need to charge our phone, we just plug it in. But for millions of people around the world, electricity is expensive, unreliable or even non-existent.

Electricity access in Kenya

An international team of researchers is investigating the impacts of electricity access in Kenya. With one of the highest levels of electricity access in Africa, Kenya is hailed as a success story. “The percentage of households with access to electricity has nearly doubled in the past 10 years – from around 40% in 2015 to almost 80% in 2025,” explains Jennifer.

And Kenya is also a leader in green energy, with over 90% of this electricity coming from renewable sources, primarily geothermal and hydro power. Given the negative environmental impact of fossil fuels, this is a commendable development.

“While Kenya is to be congratulated for this progress, it is important to note that ‘access’ doesn’t necessarily mean access to the electricity grid,” says Elizabeth. As Christopher explains, “In Kenya, national statistics don’t clearly distinguish between someone with a small solar panel powering a single lightbulb and someone whose house is connected to the grid and who has an electric cooking stove, fridge and TV.”

“Although a high percentage of

households and businesses can theoretically access electricity, in practice, the supply is irregular (blackouts are very common) and many people can’t afford the cost of installing or using electricity,” explains Winnie. This means that most Kenyans are limited in their ability to use electricity at home and for work. “This leaves people feeling like politicians and policymakers are failing in their promise to deliver electricity for all,” says Jennifer.

Digging deeper

To understand more about the impacts of accessing electricity, the team collaborated with the Kenyan social research firm, TIFA Research Kenya, to train local research assistants to carry out household surveys and recruit participants for



A Kenyan rural trade centre with electricity

focus groups. Surveys asked questions such as whether the house has electricity, where it comes from (e.g., grid or solar panel), how reliable the supply is, how much electricity they use, how much it costs, how many electricity-powered appliances they own, and whether and how the occupants run a business and participate in social and political activities. “These questions allowed us to measure whether there are changes in economic, social and political aspects of life after people gain access to electricity, or differences among people with access to more or less electricity,” says Jennifer. The focus groups allowed citizens to discuss their personal experiences, providing deeper insights into the challenges associated with a lack of access to reliable, affordable electricity.

How does access to electricity impact participation in social and political activities?

The team’s previous research had suggested that increased access to electricity leads to decreased political participation. One hypothesis for this was that once people have electrical technology in their homes, they are more likely to stay at home rather than spend time in the community and engage in political life.

In the current project, the researchers considered not only a person’s access to electricity, but also the quality of their electricity supply. They also expanded their definition of ‘political participation’ to include a wider range of activities beyond voting, including new forms of digital participation.

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“Our new research shows that increased electricity access does not decrease political participation, it simply changes the way in which people are politically active,” says Alesha. Kenyans today are using electricity-facilitated technologies to become more engaged with politics, and politicians now also use social media to connect with citizens. This means Kenyan political participation is changing much as participation has changed elsewhere. “This is not just about household level action in Kenya,” says Lauren. “Our data connects to the broader collective action that we are seeing elsewhere in the world, where citizens are protesting the lack of reliable electricity access.”

What are the wider impacts of electricity access?

Electricity is incredibly important for economic activity (e.g., running a business), education (e.g., lighting to study in the evenings and accessing information)

and communication. This means that households and businesses with reliable access to electricity are better off than those without. “In this digital era, even poor households have phones that must be kept charged,” adds Winnie. Having electricity in the home also brings health benefits. Electric lighting and cooking stoves remove the need for candles, kerosene lanterns and wood or charcoal stoves, all of which produce poor indoor air quality which can cause breathing difficulties.

The challenge of achieving equitable access to electricity

The concept of energy justice has become globally important. “Energy justice means that all citizens have access to the same quality of affordable electricity,” says Christopher. However, achieving this is not easy. The main challenge is the cost, as it is very expensive to expand the grid infrastructure to reach everyone, especially in rural areas. It is then expensive to connect a home or business to the grid, and although the government provides subsidies for this, there is also the cost of using electricity, which is prohibitively expensive for many poor households. Households not connected to the grid often depend on small solar home systems, but many cannot afford the expensive credit payments to the private companies that run the solar schemes.

All this means that while Kenya has made great progress in the expansion of renewable electricity in recent years, the reality is that most of the population cannot yet meaningfully benefit from these advances.

Meet *the team*



Dr Elizabeth Baldwin

Associate Professor, School of Government and Public Policy, University of Arizona, USA

Fields of research: Public policy, environmental policy

I have always wanted to work in public service for the greater good. I started my graduate education in law school, but I quickly realised that I could have more impact working in policy than I could ever hope to achieve by advising a single client at a time as a lawyer. When I finished law school, I gained a master's in public administration followed by a PhD in environmental policy. With this training, I can assess and advise policy strategies that are effective at addressing environmental problems.

There are lots of different ways to engage in policy issues. Young people should know that environmental and energy policy is a dynamic field – I am constantly learning new things about how people are working together to address policy challenges.

As an academic who spends a lot of time in my office, I really enjoyed getting out into the field and interacting with everyday Kenyans to talk about how they access electricity, what they use it for and the challenges that they experience.



Dr Jennifer Brass

Associate Professor, School of Public and Environmental Affairs, Indiana University, USA

Fields of research: Governance, service provision, NGOs

After college, I worked for a non-governmental organisation (NGO) in Nairobi, Kenya. This experience made me consider the role of states and non-profits in the provision of social services like education, healthcare and clean water, and I wondered how people view their government when international non-state actors provide these services. So, I pursued a PhD in political science to study these questions.

I love the process of discovery in research. I ask questions to understand how the world works and the conditions under which people's standards of living rise. To answer these questions, I go out

into the world to talk to people about things that matter to them. This research can influence policymakers to make better decisions.

I really enjoy speaking to Kenyans about their experiences of electricity access. Whether it is meeting with government officials to discuss electricity programmes or talking with rural folk who have no electricity, I always learn more about the complexities of electrification in lower-income settings. I particularly like being able to highlight the experiences of everyday people, whose voices are often not heard in discussions around infrastructure expansion.



Dr Christopher Gore

Professor, Department of Politics and Public Administration, Toronto Metropolitan University, Canada

Fields of research: Comparative politics, energy and climate policy

I learnt about environmental problems during my undergraduate degree in environmental science, but I couldn't understand why individuals and governments didn't try to improve these conditions. I was intrigued by the influence of power and authority over the environment and human well-being, so I pursued a PhD in political science and environmental studies. I came to East Africa for the first time in 2000, where I learnt about the low levels of electricity access. I've been studying this issue ever since.

Political scientists don't just study governments; they study how people with authority relate to others in society

and how society advocates for change. I am attracted to the study of contexts that may appear, on the surface, to be negative or challenging, but, in reality, show positive change or resilience in the face of adversity.

It is a privilege to talk with Kenyan civil servants who are willing to share their experiences of the challenges surrounding electricity access. Civil servants in African countries are often criticised for not working to help citizens. However, I have found that most civil servants are very dedicated to their jobs and work extremely hard with limited resources to find solutions to challenges in their countries.



Dr Lauren MacLean

Professor, Department of Political Science, Northeastern University, USA

Fields of research: Comparative political economy, development studies

I was inspired to become a political scientist by one of my college professors who started every class by sharing breaking news from the Global South, connecting it to political science concepts. At the same time, I took an African Art class and began to see how politics was represented in everyday life, and I was hooked!

Politics is everywhere! Your family, your community, your job, etc., are all impacted by politics. Political science teaches you amazing analytical skills that you can

apply to break down any problem you face. This means political science can help you succeed in many different settings, from non-profit organisations to start-up companies, and from public policy to law.

I learn so much from sitting face-to-face with Kenyan citizens and hearing about their experiences of what works well and what can be improved for the future. They provide critical insights that fill in gaps from the perspectives of governments, donors and companies working to expand electricity access.



Dr Winnie Mitullah

Professor, Institute for Development Studies, University of Nairobi, Kenya

Fields of research: Policy, governance

I was born and raised in the city of Nairobi, the capital of Kenya, and I grew up questioning the nature of governance relating to service delivery, especially around housing and garbage collection. When I went to university, I realised that the Department of Political Science and Public Administration was most suited for studying my interest in the governance of public services.

My education and career have been shaped by the scholars who taught me during university and who supported me during my early career as a young scholar.

I also read the works of radical scholars, such as Walter Rodney's *How Europe Underdeveloped Africa* and Ruth First's *Barrel of a Gun: Political Power in Africa and the Coup d'État*.

Political scientists deal with practical issues of governance which affect all sectors of the economy. I enjoy the ability to analyse political trends and institutional dynamics. Studying political science will build your capacity to engage with the realities of everyday life and equip you for advisory roles at different levels.



Dr Alesha Porisky

Assistant Professor, Department of Political Science, Northern Illinois University, USA

Fields of research: Social policy, African politics

I grew up in a family of social workers and, from a young age, have been interested in the complexities of social policy and service provision. During my undergraduate degree in political science, I began to understand that the question of 'who gets what, when and how?' is central to understanding the implementation of social welfare programmes.

There's so much to love about a career in political science. It provides the opportunity to think about big questions that have real impacts on ordinary people's lives, from why wars are fought and how aid is delivered, to how taxes

are spent and schools are run. I'm also interested in the smaller questions of how people and governments interact, such as registering to vote or attending community meetings.

The highlight of this project has been talking with people from all walks of life about their experiences of electricity. These conversations have shown how important electricity is for everyday well-being and how difficult it is to measure someone's 'access' to electricity.