International Journal of Development and Sustainability
ISSN: 2186-8662 – www.isdsnet.com/ijds
Volume 12 Number 12 (2023): Pages 643-657
ISDS Article ID: IJDS22092901

The politics of things and a safe energy transition for the energy-poor

Abiodun Omotayo Oladejo *

Directorate of Research Innovation and Development, Walter Sisulu University, South Africa

Abstract

The matrix of infiniteness of public demands and limited resources at the state's disposal to address them remains topical. This paper, adopting elite and systems theories as theoretical contexts, situates the prospects of a safe energy transition through the state and multi-community actions that will navigate the web of politics and power dynamics that underlie resourcing of the priorities of the state. It therefore argues that the state does not just respond to a citizen need merely because it is desired or valued, but because the state finds its demand persuasive and its implementation urgent. The paper recommends the systematic and sustained efforts of communities, civil society organisations, mass media, and academia to enable state engagement with a safe energy transition for energy-poor communities as a matter requiring urgent, practical actions.

Keywords: Community Energisation; Energy Justice; Politics; Renewable Energy; The State

Cite this article as: Oladejo, A.O. (2023), "The politics of things and a safe energy transition for the energy-poor", *International Journal of Development and Sustainability*, Vol. 12 No. 12, pp. 643-657.

* Corresponding author. *E-mail address:* olad007@gmail.com

1. Introduction

Globally, nearly 800 million people lack access to electricity (Timmermans and Birol, 2021) which is the single most important energy source for households. The lack of access to electricity or increasingly, alternative renewable energy options, underpins the pervasive energy crisis confronting the world today. The centrality of energy for human survival cannot be gainsaid; it is required for substantial and daily aspects of human life. Energy is needed in homes, schools, offices, factories, farms, and hospitals. Energy poverty, irrespective of the setting it may manifest in, is not only a measurement of unmet essential energy needs, but also of poverty and inequality of access to resources. Energy impoverishment is a global problem and is pronounced in the global South (Samarakoon, 2019; Mastrucci et al., 2019). It is one of the indices used for the North-South dichotomy (Feenstra and Clancy, 2020; Robison et al., 2019; Day et al., 2016).

Africa is worst affected with energy consumption per capita lowest compared to other continents (Ouedraogo, 2017; Onyeji, 2010). Sub-Saharan Africa is a sub-region with the highest number of energy poor (Timmermans and Birol, 2021; Gregory and Sovacool, 2019; IEA, 2014). This is a depressing situation especially as Africa is in dire need of increased energy access to enable its long-term economic growth and social development. Energy deprivation is not peculiar to Africa alone; other parts of the world also grapple with this phenomenon. For instance, East and South Asian countries face multidimensional energy crises with a higher demand for energy than supply (Abbas et al., 2020; Garba et al., 2019). The limited capacity to meet energy demand coupled with the use of solid and fossil fuels for cooking is an existential problem in South Asia (Abbas et al., 2020). Contrary to views that energy challenges are experienced only in low-income countries, high-income countries may also face substantial energy deprivations, especially in urban peripheries (Papada and Kaliampakos, 2018; Marchand et al., 2019; Middlemiss and Gillard, 2015; Robinson et al., 2018). For instance, in the United States, there has been a total of 26,048 reported cases of power outage in Pennsylvania, 25,913 in New York, 7,338 in Georgia, 7315 in South Carolina, and 6,991 in New Jersey just between January and June 2021 (PowerOutage.US, 2021). These outages come with penetrating deprivations for household energy requirements. So too in Europe, in 2003, one of the biggest blackout incidents ever witnessed there took place in Italy, leaving over 56 million people without electricity for several days (European Commission, 2018). These outages resulted in deaths, injuries, health deterioration, and economic damage (ELCON, 2004; CNN, 2003). The consequent distress faced by communities that depend solely on electricity from the national grid can be enormous with this disruption exacerbated where there is no adequate alternative energy option.

Household energy deprivation remains concerning. Evidence has shown that less than one-third of countries in the world have achieved full reliance on clean fuels and technologies just for cooking (WHO, 2021). Hence, the patronage and use of unsafe fuels is now a symmetry that energy-poor households are accustomed to (Usman et al., 2020; Wen et al. 2020). Because of the functional indispensability of energy, energy-poor households must find cheap but often unsafe and unhealthy alternatives such as coal and illuminating paraffin for cooking, warmth, and other domestic energy requirements. This however creates vulnerabilities to health and wellbeing, especially in urban informal settlements already burdened by their limited access to safe energy, the use of unsafe energy in already precarious home structures, and constrained access to emergency support and health care (Kimemia et al., 2021). These households, especially those reliant on paraffin or kerosene combustion, face disproportionate risks to health through exposure to air pollution, poisoning ingestion, and burn injury (Kimemia et al., 2021). In sub-Saharan Africa, over 1.4 million fuel-related burns were reported in 2017 (James et al., 2020).

However, modern, safe, and renewable energy alternatives have been developed and are available to supplement grid-supplied electricity (Nussbaumer et al., 2012; Tang and Liao, 2014; Villalobos-Barría et al., 2019). The upscaling and adoption of these alternatives in energy-poor societies and households are still at the lowest ebb and that is where the problem lies. It is noteworthy that energy matters, like many other societal issues, are situated within the purview of governmental responsibility and power. Just like many other institutional phenomena in society, energy issues are contained in the exclusive legislative mandates of many countries, meaning that responsibilities vis-à-vis policy formulation and implementation about energy generation, distribution, and consumption are vested in national governments (Yang et al., 2019; Oh et al., 2018; Carter and Jacobs, 2014). Essentially, energy is thus a political issue because it involves authoritative decision-making. This paper, recognising that politics is at the centre of everything, and all public and even private domains (Oh et al., 2018; Carter and Jacobs, 2014), unravels factors that may inform governmental decisions as to which programme gets attention out of its multiple priorities, while bearing in mind the urgency of renewable and modern energy adoption.

2. From energy poverty to energy justice

The definition of what constitutes energy poverty is a subject of scholarly contestation as there is no universally accepted definition (Meyer et al., 2018; Okushima, 2016). There is however consensus largely about its indicators. Four of these indicators have been identified. The first one is a supply-demand measure that formulates energy poverty from the variance between energy supply and demand. In this sense, energy poverty results when demand exceeds supply (Chipango, 2021; Abbas et al., 2021; Garba et al., 2019; Wei and Liao, 2018). The net deficit from this mismatch results in strains in energy distribution, and consequently energy poverty, in regions where energy supply is dependent on electricity from the national grid. This is a common challenge in South countries where energy supply is far lower than its demand (Chipango, 2021; Unaegbu, 2019, Ouedraogo, 2017). The second measure identified is affordability (Che et al., 2021; Brown et al., 2020; Lin et al., 2020; Flues and Van Dender, 2017). This measure locates energy poverty in a household's inability to pay for the necessary levels of energy use within normal spending patterns (Deller and Price, 2018; Boomsma et al., 2017; Flues and Van Dender, 2017). In the same vein, an income approach has been put forward as a measure of energy poverty (Boardman, 1991). This perspective sees energy poverty as a situation whereby 10 percent of a household's net income is unable to offset their energy needs (Sánchez et al., 2020; Boardman, 1991). This indicator also relates to the correlation between the reduction in disposable income and increase in energy poverty. Heindl and Schuessler (2015: 125) used general impoverishment as a measure of energy poverty and argued that "impoverishment requires that it must be possible to push a household into energy poverty by decreasing its disposable income". The energy distribution gap has also been identified as an indicator of energy poverty. Studies have shown that energy deprivations can result from distribution lapses (Villalobos et al., 2021; Tarekegne, 2020; Njiru and Letema, 2018). It has been reported that some populations in Kenya have perennial blackouts because it is not economically viable to link them to the national grid because of their remoteness (Njiru and Letema, 2018).

Energy access makes a difference in matters of life and death. For instance, the death toll from a cold wave which coincided with power outages in Texas in February 2021 led to hundreds of deaths (Calma, 2021; Griffin, 2021). There have also been instances of surgical procedures being performed with torchlight because of lack of access to electricity (Oyinlola and Faponle, 2016). In the same vein, there are individuals living in regions

with extreme climatic conditions who concomitantly lack access to the required levels of energy services needed for their adaptation. These individuals are susceptible to adverse health conditions (Abbas et al., 2021; Oliveras et al., 2021). The direct health effects of energy poverty in cold regions, according to Oliveras et al. (2021), are increased morbidity rates and a higher risk of mortality. Cold temperatures are strongly related to cardiovascular and respiratory diseases, especially in children (Marmot Review Team, 2011).

The plethora of effects of energy poverty are not fictional; they are lived and widely reported experiences of people in different parts of the world where energy poverty is pervasive (Gregory et al., 2019; Nalule, 2018). The need to therefore increase access to clean energy and address inequality and general poverty barriers to such access cannot be more urgent. This is the crux of energy justice – the reduction of emissions from fossil fuels and provision of access to clean and affordable energy (McCauley et al., 2019). Lacey-Barnacle (2020) vividly captures the imperative and scope of energy justice which includes distributional, procedural, restorative, and recognition justices. Distributional justice, according to Lacey-Barnacle, means creating new low-carbon or renewable energy infrastructures in deprived communities in a time of austerity. Procedural justice refers to inclusivity and community participation in local energy transitions. Moreover, restorative justice denotes the need for the remediation of past claims of injustice, whilst local energy systems that seek to advance greater 'active participant' (skills training and employment) prospects for disadvantaged communities in which they, or their projects, are embedded, may be underpinned by recognition justice concerns.

These justices, however, cannot be attained in a vacuum. Fundamentally, this is where government comes in, because it is the embodiment of collective aspiration (Iqbal et al., 2020). Government thus needs to brace up to the challenge of a safe energy transition (Flatt et al., 2020; Tait et al., 2013; Wolpe and Reddy, 2010). In fact, the adoption of the United Nations' 2030 Sustainable Development Goals (SDGs) by heads of states and governments of member nations rests on this position. States, through their membership in the UN, have committed to ensuring access to affordable, reliable, and modern energy for all by 2030 (Minh and Son, 2021; Franco et al., 2020; Santika et al., 2020; Tucho and Kumsa, 2020). A critical element in energy discourse is politics, hence, the next section focuses on the centrality of politics and authoritative decision-making structures.

3. X-raying politics, politics of things, and the state

Harold Lasswell defined politics as the determination of who gets what, when, and how (Lasswell, 2018; Dunn, 2018). Easton (1957) defined it as the authoritative allocation of values. What these popular definitions of politics have in common is political power. Power is a concept around which any definition of politics revolves. In Lasswell's acclaimed book, In Politics: Who Gets What, When and How published in 1936, he viewed the elite as the holders of political power in society, even in contemporary democratic dispensations (Gregerson, 2021). It thus means that to determine who gets what, when, and how, and to allocate values in the society would require a medium, an authority system that supersedes individuals in the society.

Politics thus connotes the formation of public policies at governmental level. Therefore, whatever has a bearing on a governmental decision is political. Thus, education, defence, energy, economy, etc. are all linked to the sphere of politics and governmental superintendence. This shows the pervasiveness of politics in human lives as there is hardly any aspect of our lives that is detached from politics. It is safe to say that just as the

world is coming to understand the reality of the Internet of Things (Popkova et al., 2019; Li et al., 2018), there is a need for an increased awareness of the politics of things. As a matter of fact, the Internet itself is underlain by politics. So too, the government has interest in every sphere of human existence. From the water that we drink to the food we eat, from town planning to refuse collection, from broadband technology to household fuels, we are webbed into politics because powerful authorities and interests are deciding courses of action, enforcing rules, and overseeing issues that impinge on our existence. Politics is a social fact that has evolved out of macro-level interactions in society, but which has assumed a life of its own and thus controls the individuals that forged it (Carls, 2021; Durkheim, 1972).

A little historicisation of politics is apt at this point. The Greek philosopher, Aristotle, in his famous work Politics - which is the pioneering work on the concept - began with the observation that "man [sic] is by nature a political animal" (Ntete-Nna, 2004). By this, he averred that the essence of social existence is politics and that any two or more individuals interacting with one another are invariably involved in a political relationship (Ntete-Nna, 2004). He believed that as people seek to define their position in society, as they attempt to wring personal security from available resources, and as they try to influence others to accept their points of view, they find themselves engaging in politics (Ntete-Nna, 2004). In this broad sense, everyone is political. Aristotle concluded, however, that the only way to maximise individual capabilities and to attain the highest form of social life was through political interaction with others in an institutionalised setting. This setting is designed to resolve social conflicts and set collective goals – the state. In essence, all people are political, but some are more political than others.

Let us properly situate the superintendence of politics over human lives by delving into explaining its adjuvant constituent – the state – and its emergence and functions. The state is one of the concepts that have found their way into the regular linguistic and communication mesh. However, in social science scholarship, the state's most accepted definition is the one by Max Weber. He defined the state as "a human community which successfully claims the monopoly of the legitimate use of force within a given territory" (Brett et al., 2017:6). Theorists such as Aristotle and Thomas Hobbes believed that the state emerged, in the main, to perform certain functions critical to personal liberty, justice, and common good. The state, according to Aristotle**,** is "a body of citizens sufficing for the purposes of life". That is, the state is involved in the critical phenomena that affect the lives of the citizenry. He further argued that the state emerged to ensure collective good, and it is the final stage of natural evolution of human society. The state, in this sense, is analogous of the sophistication and development that society has been through from the earlier forms of society such as hunter-gatherer and pastoral societies which lacked a defined political institution. The state is thus conceptualised as the embodiment of legal, rational authority, and economic power to engender public good. However, the extent to which the state, as an embodiment of collective aspiration, has fostered public good in countries around the world remains a controversial subject (König and Winkler, 2020; Syahputri et al., 2019; Schachter, 1995). It is thus analytically useful to discuss the intersection between politics and public demands in light of competing priorities the state needs to respond to.

4. How does the state *prioritise* its priorities?

Politics involves the allocation of value among competing ends. Hence, the state is often confronted with a multiplicity of priorities beckoning to it for intervention. There is enormous demand for social services and welfare, education, health, employment, food security, portable water, road construction and rehabilitation,

energy requirements by citizens, and a host of others. This precariousness is often inopportunely variegated with a paucity of the needed resources to address these competing ends. It is at this point that the state exercises paramountcy to decide which of the priorities gets resourced or implemented and which is jettisoned or kept on hold.

The question that then arises is how the state decides which of its infinite priorities is backed and resourced in the light of its finite resources. To answer this question, two theories provide frameworks for understanding how the state makes that decision, and they are elite and systems theories. These theories apply to energy politics because energy policies are made by the powerful people in any country who may decide to prioritise community energization in energy-deprived communities or not. Two, safe energy is a citizen demand within a political system, which has to compete with other equally important citizen needs. Vilfredo Pareto and Gaetano Mosca, the famed elite theorists, believed that the elite – a small minority comprising members of political and economic networks – holds the most power and claims clear paramountcy in deciding the direction in which a society must go (Gregerson, 2021). Initially, discourse on the elite was often linked to the political class in any given society. However, scholars such as Ralph Milliband, Nico Poulantzas and C Wright Mills argued for the inclusion of the business class because both classes are linked through a panoply of social connections which makes the economic class very influential in the scheme of things (Ryan, 2020; Mills and Wolfe, 2000). So, for elite theorists, their argument as to what determines *elite prioritising* is elite consensus (Yakovlev et al., 2018; Massie, n.d.). They decide what they think is in the best interests of the people. This is irrespective of whether there is popular support for any course of action that the state embarks on. That is the locus of political power – the ability to pursue a course of action or carry out one's will despite opposition (Bottomore, 1982). Thus, the elite exercise clear power when it comes to what programme or issue is given attention. They decide for the rest of society what is best for them. As mentioned earlier, the elite is a social fact that is an outcome of political relationships at macro-level. It however has become a force stronger than the constituent elements that created it. At other times, they may prioritise a course of action simply because it advances their interests or because it will serve as political patronage. A project or demand may be actioned if the political elite believes that it will enhance their popularity and brighten their chances in the next election, i.e. to maintain power. At other times, political patronage is prioritised. Thus, programmes and projects become avenues to reward political support and alliances. All these speak to the prerogative and unilaterality of elite action, and this is rooted in the behemoth complex that the state is suffused in. It must be noted however that the elite is not monolithic in itself because of (in-)elite polarity among the ruling elite, and between the ruling elite and the elite in the opposition waiting for its turn to clinch power. Elite polarisation is a common feature in most societies today (Green et al., 2020; Robison and Mullinix, 2016). That said, essentially, elite behaviour is the same regardless of this schism. In fact, there are occasions that intra-elitist conflict has been suspended, especially to preserve elite rule (Christians, 2021; Collignon, 2021).

Systems theory as a heuristic framework developed from David Easton's work *An Approach to the Analysis of Political Systems* published in 1957 (Easton, 1957). The crux of this theory is input-output analysis which is applicable to the subject as to how the state decides which priority is prioritised out of the plethora of demands on it. The theory posits that every political system, through a complex set of certain processes or interactions, receives inputs from its environment from which specific inputs are then transformed into outputs of authoritative policies, decisions, and implementation. In essence, some of the inputs will undergo a conversion process and come out as outputs (Fuchs and Klingemann, 2011; Almond, 2020; Son, 2018; Easton, 2017; Senjaya, 2017). The political system, as an open system, must have the resilience to respond to its environment,

facing all obstacles, and adjusting itself to conditions (Pooja, 2021). It is noteworthy that the political system, in Easton's discursive framing of input-output analysis, has a gatekeeper mechanism for sifting the demands coming from the environment. What that implies is that the state receives many inputs which it may not have the wherewithal to convert into outputs. Hence, because of the insufficiency of resources to cater to all the demands and other factors mentioned earlier, decisions must be made as to which inputs will be converted and which will not. At this stage, there is an intersection between environmental demands and the elite's prerogatives. Barring any exceptional circumstances, the will of the elite will usually supersede. In the next section, a suite of actions is proposed to ensure energy justice, especially for marginal communities.

5. Politics of things and energy-impoverishment: The way forward

This paper has roundly articulated the overarching influence of politics in almost every aspect of people's existence. In the same vein, it has discussed the indispensability of energy for a dignifying existence, and the pervasive energy poverty globally. The International Energy Agency (2012, cited in Law, 2014) had reported that by 2030, if nothing is done to control energy poverty, there will be 4,000 deaths a day from toxic smoke and indoor fires, more than the premature deaths from malaria, tuberculosis, or HIV/AIDS. Currently, only very few countries have achieved a safe and sustainable energy supply that is higher than or at par with its demand. Even in those countries, there are still issues of affordability, income, and distribution constraints which still leave some citizens in energy poverty. In most countries, energy supply is less than its demand, thus forcing people to resort to unsafe and unclean energy options which not only portend health and safety risks, but also ecological devastation (James et al., 2020; Embiale et al., 2019).

The incidents of burns, poisoning, and health deterioration just from the use of paraffin come at great cost to government and the affected communities and individuals. The care for burn victims is generally very expensive (WHO, 2016), with e.g. South Africa spending R490 million to care just for those with paraffin burns (WHO, 2018), much of which would be through the public health system where most burn victims from impoverished communities would present. Thus, based on the health and economic costs, it is argued to be an imperative for political leaders to prioritise interventions for energy-poor households and communities. In South Africa, many of the fires that lead to injury, over 5000 a year, are ignited through poorly constructed paraffin stoves, usually the only appliances available to many because of the cost. Yet, the government's response has been muted, despite the evidence of the impact of energy poverty. One could say this is not an issue that directly affects the political elite and hence its apparent non-prioritisation. There are several safe, cost-effective and renewable energy options (with some still in development) that may be subsidised or incentivised and used to control the phenomenon of energy impoverishment (Croy et al., 2019). For South Africa, the initial investment of basic home kits for the 600,000 energy impoverished households would result in a significant return on the hospital costs currently accrued, and likely less than the annual cost just of the care for the consequent burn injuries. Practically, political leadership can create the enabling environment for safe communities to ensure access to safe and affordable energy interventions, as envisioned in the country's 2030 National Development Programme. This could be featured along the current national commitments to a portfolio of interventions to support poverty alleviation in general, through basic income grants and suitable housing, among other measures (Van Niekerk et al., 2021). Governments should thus be called on to offer greater recognition and invest in specific safe and clean energy technologies needed for those who are not able to join the grid, just as it does in its support of grid-supplied electricity. These technologies may be used to

bridge the gap that exists between energy supply and demand, especially for those considered energy impoverished.

However, all this takes us back to the issue of the authoritative allocation of values out of multiple priorities and the state's prerogative in determining what is resourced or not. Similarly, another critical issue looped into these is that the state often lacks the resources required to attend to all the demands placed on it. The question now is, how can energy-poor communities and households get the state to put safe energy on the front burner despite the myriads of issues competing for its attention?

Solutions may be located in the theories previously discussed: elite and systems theories. Even though elite theory emphasises the powerfulness of the minority vested with political and economic power in the society, this power is not limitless and inherently self-sustaining. Elite theorists believe that the elite is propelled by the need to self-preserve more than any other consideration. Hence, they would rather yield to pressure from society than have their position in that society threatened because of unpopularity. So, what this would mean for an energy migration in a society that has a significant segment of its population dependent on unsafe energy alternatives is for the state to be compelled to make and implement policies that discourage the use of unsafe fuels. This may come at great cost to the government because of the taxes it collects from the companies that produce these fuels. It will also mean that these companies may be out of business in the long run, except if they refocus their business to adapt to the new reality.

For systems theorists, every political system has a feedback system to determine the pulse from the environment. Feedback is a dynamic process through which information about the outputs and the environment is communicated to the system which may result in subsequent change or modification of the system and its outputs (Pooja, 2021). Demand and (non)support information may come into the system as inputs in the usual manner. When information relating to converted inputs comes in, then there arises a re-inputation of inputs already converted into outputs. Consequently, the political system gets an opportunity to adjust its behaviour and make it amenable to that feedback. This way, feedback engenders efficiency in systems. Where there is no feedback, the system is likely to operate in an unresponsive manner and lose support and legitimacy. Feedback is a continuum of obtaining information, reacting, knowing the effects, and improving a system's behaviour and responses. It is a complex process of 'output-information-reinputation-recommunication-reoutputation' (Pooja, 2021).

Feedback mechanisms convey effects and consequences of outputs into the system again as inputs which then make the system more dynamic, purposive, and goal-oriented. The core of feedback mechanism in a given system is that the environment has unmeasured impacts on the system which when properly deployed, the system will have no option but to respond if it still wants to maintain support from the environment. So, in applying this theory to energy migration of energy-poor households, it is therefore critical that the environment – communities affected, concerned civil society groups, etc. – gives feedback to the political system so as to influence it to modify its response to the demand for safe energy for energy-deprived households.

6. Conclusion

The centrality of politics and superintendence of the state over almost every sphere of life is incontestable. It therefore means that a safe energy transition for energy-impoverished households is significantly linked to

political considerations. The energy-poor households have an urgency to engage the state and the political system in a manner that will make community energisation for energy-poor communities and households a *prioritised* priority. To do this, a few schemas may be adopted. The first action plan critical to ensuring that the state makes community energisation a top priority is the amplification of community voice. This can be achieved through community mobilisation and action. The communities affected by severe energy deprivations have to articulate a position on energy and engage with the political system in a recurrent manner till there is a definite response. Achieving this requires community representations (pressure groups) to government structures and engagement with local and mass media so as to generate enough traction and propaganda. Public discourse about energy deprivation should be ongoing in the public sphere. Parliamentary lobbying will also go a long way to amplify community voice on the need for increased access to safe energy for hitherto energy-poor households and communities. Modern energy technologies such as solar home systems, biodigesters, and other safe energies and technologies may be deployed in these communities. These may be achieved through public-private partnership that provides safe alternatives to grid-supplied electricity at affordable rates. Moreover, there is a need for science-based engagement by civil society organisations involved in safe energy promotion. Such engagements with the state, however, need to be based on evidence and scientific knowledge rather than anecdotal accounts.

The certainty is that the state needs to fund energy equity, make it a flagship priority, and be actively involved in the process of sustainable community energisation. However, the state does not just respond to every citizen need because of the factors mentioned earlier. It will take sustained efforts of communities, civil society, mass media, and academia to get the state to see reasons why safe energy transition for energy-poor communities is a matter requiring urgent, practical actions by the state.

References

Abbas, K., Li, S., Xu, D., Baz, K. and Rakhmetova, A. (2020), "Do socioeconomic factors determine household multidimensional energy poverty? Empirical evidence from South Asia", *Energy Policy*, No. 146, p. 111754.

Abbas, K., Xie, X., Xu, D. and Butt, K. M. (2021), "Assessing an empirical relationship between energy poverty and domestic health issues: A multidimensional approach", *Energy*, No. 221, p. 119774.

Almond, G. A. (2020), "11. The Political System and Comparative Politics: The Contribution of David Easton", in: *Contemporary empirical political theory,* pp. 219-230. University of California Press.

Boardman, B. (1991), "Fuel poverty is different", *Policy Studies*, Vol. 12 No. 4, pp. 30-41.

Boomsma, C., Pahl, S., Jones, R. V. and Fuertes, A. (2017), "Damp in bathroom. Damp in back room. It's very depressing!" exploring the relationship between perceived housing problems, energy affordability concerns, and health and well-being in UK social housing", *Energy Policy*, No. 106, pp. 382-393.

Brett, W., Xidias, J. and McClean, T. (2017), *An Analysis of Max Weber's Politics as a Vocation*. Macat Library.

Brown, M.A., Soni, A., Lapsa, M.V., Southworth, K. and Cox, M. (2020), "High energy burden and low-income energy affordability: conclusions from a literature review", *Progress in Energy*, Vol. 2, No. 4.

Calma, J. (2021), "The climate controversy swirling around NFTs", The Verge, 15, available at: https://www.theverge.com/2021/3/15/22328203/nft-cryptoart-ethereum-blockchain-climate-change (Access 14 April 2024).

Carls, P. (2021), "The social fact in Durkheim's late work: Structural hermeneutics, positive sociology, and causality", *Journal of Classical Sociology*, No. 2, pp. 222-246.

Carter, N. and Jacobs, M. (2014), "Explaining radical policy change: the case of climate change and energy policy under the British Labour government 2006–10", *Public Administration*, Vol. 92 No. 1, pp. 125-141.

Che, X., Zhu, B. and Wang, P. (2021), "Assessing global energy poverty: An integrated approach", *Energy Policy*, Vol. 149, p. 112099.

Chipango, E.F. (2021), "Constructing, understanding and interpreting energy poverty in Zimbabwe: A postmodern perspective", *Energy Research and Social Science*, Vol. 75, 102026.

Christians, M.A. (2021), "Elite consensus: The case of land reform in South Africa", Thesis (MA), Stellenbosch University.

CNN (2003), "Italy recovering from big blackout", available at: CNN.com - Italy recovering from big blackout - Sep. 28, 2003 (retrieved on 30th August, 2021).

Collignon, S., Makropoulos, I. and Rüdig, W. (2021), "Consensus secured? Elite and public attitudes to "lockdown" measures to combat Covid-19 in England", *Journal of Elections, Public Opinion and Parties*, Vol. 31(sup1), pp. 109-121.

Croy, J.R., Gutierrez, A., He, M., Yonemoto, B.T., Lee, E. and Thackeray, M.M. (2019), "Development of manganese-rich cathodes as alternatives to nickel-rich chemistries", *Journal of Power Sources*, Vol. 434, 226706.

Day, R., Walker, G. and Simcock, N. (2016), "Conceptualising energy use and energy poverty using a capabilities framework", *Energy Policy*, Vol. 93, pp. 255-264.

Deller, D. and Price, C.W. (2018), "Energy Affordability in the UK: Corrected Energy Expenditure Shares 1992-2014", CCP Working Paper No. 18-8, University of East Anglia (UEA), August 31, 2018.

Durkheim, E. (1972), *Emile Durkheim: selected writings*. Cambridge University Press.

Dunn, W. N. (2018), "Harold Lasswell and the study of public policy", In: Oxford Research Encyclopedia of Politics.

Easton, D. (2017), "A systems analysis of political life", In: *Systems Research for Behavioral Science systems Research,* pp. 428-436. Routledge.

Easton, D. (1957), "An approach to the analysis of political systems", *World politics*, Vol. 9 No. 3, pp. 383-400.

Embiale, A., Zewge, F., Chandravanshi, B.S. and Sahle-Demessie, E. (2019), "Short-term exposure assessment to particulate matter and total volatile organic compounds in indoor air during cooking Ethiopian sauces (Wot) using electricity, kerosene and charcoal fuels", *Indoor and Built Environment*, Vol. 28 No. 8, pp. 1140-1154.

ELCON (2003), "The Economic Impacts of the August 2003 Blackout", available at: https://elcon.org/wp-content/uploads/Economic20Impacts20of20August20200320Blackout1.pdf (retrieved on 30th August, 2021).

European Commission (2018), "Commission Staff Working Document", available at: https://eur-lex.europa.eu/resource.html?uri=cellar:20674470-b7b9-11e6-9e3c-01aa75ed71a1.0001.02/DOC_1&format=PDF (accessed on 10th April 2022).

Feenstra, M. and Clancy, J. (2020), "A view from the north: Gender and energy poverty in the European Union", In: *Engendering the Energy Transition*, pp. 163-187, Palgrave Macmillan, Cham.

Flatt, V.B., Baker, S.H., Farber, D.A., Glicksman, R.L., Kaswan, A., Klass, A.B., Klein, C.A., Krakoff, S., Mintz, J.A., Outka, U., Owen, D., Rohlf, D.J., Sokol, K., Tomain, J., Wiseman, H.J. and Zellme, S.B. (2020), "Climate, Energy, Justice: The Policy Path to a Just Transition for an Energy-Hungry America", available at: https://escholarship.org/uc/item/50s3163v (Access 13 April 2024).

Flues, F. and Van Dender, K. (2017), "The impact of energy taxes on the affordability of domestic energy", OECD Taxation Working Papers 30, OECD Publishing.

Franco, I.B., Power, C. and Whereat, J. (2020), "SDG 7 affordable and clean energy", In: *Actioning the Global Goals for Local Impact*, pp. 105-116. Springer, Singapore.

Fuchs, D. and Klingemann, H.D. (2011), "Chapter three David Easton: The Theory of the Political System", *Maestri of Political Science*, Vol. 2, p. 63.

Garba, I., Nieradzinska, K. and Bellingham, R. (2019), "The energy poverty situation: a review of developing countries", In: *Advanced Studies in Energy Efficiency and Built Environment for Developing Countries*, pp. 41-49. Springer.

Green, J., Edgerton, J., Naftel, D., Shoub, K. and Cranmer, S. J. (2020), "Elusive consensus: Polarization in elite communication on the COVID-19 pandemic", *Science Advances*, Vol. 6 No. 28, p. eabc2717.

Gregerson, E. (2021), "Harold Lasswell: American political scientist", https://www.britannica.com/biography/Harold-Lasswell (retrieved on 15th July 2021).

Gregory, J., and Sovacool, B.K. (2019), "Rethinking the governance of energy poverty in sub-Saharan Africa: reviewing three academic perspectives on electricity infrastructure investment", *Renewable and Sustainable Energy Reviews*, Vol. 111, pp. 344-354.

Griffin, T. (2021), "Death toll rises from Texas February freeze, power outages", available at: https://www.kristv.com/news/texas-news/death-toll-rises-from-texas-february-freeze-power-outages (retrieved on 19th July 2021).

Heindl, P. and Schüssler, R. (2015), "Dynamic properties of energy affordability measures", *Energy Policy*, Vol. 86, pp. 123-132.

IEA (2014), Africa Energy Outlook: A Focus on Energy Prospects In sub-Saharan Africa. Paris: World Energy Outlook Special Report, International Energy Agency.

Iqbal, M. and Virginia, C.Y. (2020), "The Behavior of Using Online System of Public Aspirations and Complaints Service (LAPOR) in Mataram City", *TRANSFORMASI: Jurnal Manajemen Pemerintahan*, pp. 125-140.

James, S.L., Lucchesi, L.R., Bisignano, C., Castle, C.D., Dingels, Z., Fox, J.T., ... and Mokdad, A.H. (2020), "Epidemiology of injuries from fire, heat and hot substances: global, regional and national morbidity and mortality estimates from the Global Burden of Disease 2017 study", *Injury prevention, Vol. 26* (Suppl 2), pp. i36-i45.

Kimemia, D., Van Niekerk, A. and Seedat, M. (2021), "Paraffin dangers and health and socioeconomic consequences: Urgent need for policy action", *SAMJ: South African Medical Journal*, Vol. 111 No. 1, pp. 17-19.

König, M. and Winkler, A. (2020), "COVID-19 and economic growth: does good government performance pay off?", *Intereconomics*, Vol. 55 No. 4, pp. 224-231.

Lacey-Barnacle, M. (2020), "Proximities of energy justice: contesting community energy and austerity in England", *Energy Research and Social Science,* Vol. 69, 101713.

Lasswell, H.D. (2018), *Politics: Who gets what, when, how*. Pickle Partners Publishing.

Law, L. (2014), Energy, poverty and the family. South African Catholics Bishops Conference. Parliamentary Liaison Office: Briefing Paper 360.

Li, S., Da Xu, L. and Zhao, S. (2018), "5G Internet of Things: A survey", *Journal of Industrial Information Integration*, Vol. 10, pp. 1-9.

Lin, J., Marshall, K.R., Kabaca, S., Frades, M. and Ware, D. (2020), "Energy affordability in practice: Oracle Utilities Opower's business Intelligence to meet low and moderate income need at Eversource", *The Electricity Journal*, Vol. 33 No. 2, 106687.

Marchand, R., Genovese, A., Koh, S.L. and Brennan, A. (2019), "Examining the relationship between energy poverty and measures of deprivation", *Energy Policy*, Vol. 130, pp. 206-217.

Marmot Review Team (2011), "The Health Impacts of Cold Homes and Fuel Poverty", available at: https://www.readkong.com/page/the-health-impacts-of-cold-homes-and-fuel-poverty-6049206 (retrieved on 7th July 2021).

Massie, J. (n.d.), "Elite Consensus and Ineffective Strategic Narratives: The Domestic Politics Behind Canada's Commitment to Afghan.", available at: https://www.taylorfrancis.com/chapters/edit/10.4324/9781315770734-16/elite-consensus-ineffective-strategic-narratives-domestic-politics-behind-canada-commitment-afghanistan-justin-massie (access 13 April 2024).

Mastrucci, A., Byers, E., Pachauri, S. and Rao, N.D. (2019), "Improving the SDG energy poverty targets: Residential cooling needs in the Global South", *Energy and Buildings*, Vol. 186, pp. 405-415.

McCauley, D., Ramasar, V., Heffron, R.J., Sovacool, B.K., Mebratu, D. and Mundaca, L. (2019), "Energy justice in the transition to low carbon energy systems: Exploring key themes in interdisciplinary research", available at: https://sussex.figshare.com/articles/journal_contribution/Energy_justice_in_the_transition_to_low_carbon_energy_systems_exploring_key_themes_in_interdisciplinary_research/23463539 (Access 13 April 2024).

Meyer, S., Laurence, H., Bart, D., Middlemiss, L. and Maréchal, K. (2018), "Capturing the multifaceted nature of energy poverty: Lessons from Belgium", *Energy research and social science*, Vol. 40, pp. 273-283.

Middlemiss, L. and Gillard, R. (2015), "Fuel poverty from the bottom-up: Characterising household energy vulnerability through the lived experience of the fuel poor", *Energy Research and Social Science*, Vol. 6, pp. 146-154.

Mills, C.W., Wright, C. and Wolfe, A. (2000), *The power elite*, Vol. 20. Oxford University Press.

Minh, H.D. and Son, N.H. (2021), Electricity poverty reduction as an indicator of progress towards the Sustainable Development Goal 7: Vietnam.

Nalule, V.R. (2018), Energy poverty and access challenges in sub-Saharan Africa: The role of regionalism. Springer.

Njiru, C.W. and Letema, S.C. (2018), "Energy poverty and its implication on standard of living in Kirinyaga Kenya", *Journal of Energy*, Vol. 2018.

Ntete-Nna, N.J. (2004), *Contemporary Political Analysis: An Introduction*. Owerri: Springfield Publishers Ltd.

Nussbaumer, P., Bazilian, M. and Modi, V. (2012), "Measuring energy poverty: Focusing on what matters", *Renewable and Sustainable Energy Reviews*, Vol. 16 No. 1, pp. 231-243.

Oh, T. H., Hasanuzzaman, M., Selvaraj, J., Teo, S.C. and Chua, S.C. (2018), "Energy policy and alternative energy in Malaysia: Issues and challenges for sustainable growth–An update", *Renewable and Sustainable Energy Reviews*, Vol. 81, pp. 3021-3031.

Okushima, S. (2016), "Measuring energy poverty in Japan, 2004–2013", *Energy policy*, Vol. 98, pp. 557-564.

Oliveras, L., Peralta, A., Palència, L., Gotsens, M., López, M.J., Artazcoz, L. ... and Marí-Dell'Olmo, M. (2021), "Energy poverty and health: Trends in the European Union before and during the economic crisis, 2007–2016", *Health and Place*, Vol. 67, 102294.

Onyeji, I. (2010), "On the determinants of energy poverty in Sub-Saharan Africa", AIAE Research Paper 5, African Institute for Applied Economics, Enugu, Nigeria.

Ouedraogo, N.S. (2017), "Modeling sustainable long-term electricity supply-demand in Africa", *Applied Energy*, Vol. 190, pp. 1047-1067.

Oyinlola, O. and Faponle, A. (2016), "We perform surgeries with torchlights and lamps in University Teaching Hospitals", available at: https://www.nairaland.com/2996412/perform-surgeries-torchlights-lamps-univ (retrieved on 20th July, 2021).

Papada, L. and Kaliampakos, D. (2018), "A Stochastic Model for energy poverty analysis", *Energy Policy*, Vol. 116, pp. 153-164.

Pooja (2021), "4 Major Premises of System Theory according to Easton's Model Analysis", available at: https://www.politicalsciencenotes.com/articles/4-major-premises-of-system-theory-according-to-eastons-model-analysis/496 (Retrieved on 27th July 2021).

PowerOutages.US (2021), "Tracking, Recording and Aggregating Power Outages across the United States", available at poweroutages.us (retrieved on 1st September 2021).

Popkova, E.G., Egorova, E.N., Popova, E. and Pozdnyakova, U.A. (2019), "The model of state management of economy on the basis of the internet of things", In: *Ubiquitous Computing and the Internet of Things: Prerequisites for the Development of ICT*, pp. 1137-1144. Springer, Cham.

Ryan, C.E. (2020), "Wright Mills' Theory of the Power Elite", available at: https://sites.psu.edu/academy/2020/03/29/c-wright-mills-theory-of-the-power-elite/ (Retrieved on 27th July 2021).

Robinson, C., Bouzarovski, S. and Lindley, S. (2018), "Getting the measure of fuel poverty': the geography of fuel poverty indicators in England", *Energy Research and Social Science*, Vol. 36, pp. 79-93.

Robinson, C., Lindley, S. and Bouzarovski, S. (2019), "The spatially varying components of vulnerability to energy poverty", *Annals of the American Association of Geographers*, Vol. 109 No. 4, pp. 1188-1207.

Robison, J. and Mullinix, K.J. (2016), "Elite polarization and public opinion: How polarization is communicated and its effects", *Political Communication*, Vol. 33 No. 2, pp. 261-282.

Samarakoon, S. (2019), "A justice and wellbeing centered framework for analysing energy poverty in the Global South", *Ecological Economics*, Vol. 165, 106385.

Sánchez, C.S.G., Fernández, A.S., Peiró, M.N. and Muñoz, G.G. (2020), "Energy poverty in Madrid: Data exploitation at the city and district level", *Energy Policy*, Vol. 144, 111653.

Santika, W.G., Urmee, T., Simsek, Y., Bahri, P.A. and Anisuzzaman, M. (2020), "An assessment of energy policy impacts on achieving Sustainable Development Goal 7 in Indonesia", *Energy for Sustainable Development*, Vol. 59, pp. 33-48.

Schachter, H.L. (1995), "Reinventing government or reinventing ourselves: Two models for improving government performance", *Public Administration Review*, pp. 530-537.

Senjaya, I.W. (2017), "Kebijakan Publik Perlindungan Lahan Pertanian Di Kabupaten Batang: Analisis Teori David Easton", *Jurnal Hukum Khaira Ummah*, Vol. 12 No. 4, pp. 825-832.

Son, K.M. (2018), "Cybernetic Freedom: David Easton, Systems Thinking, and the Search for Dynamic Stability", *American Political Thought*, Vol. 7 No. 4, pp. 614-645.

Syahputri, Y., Dalimunthe, H., Sabrina, H. and Rahmadhani, S. N. (2019), Factors that Influence the Reality of Performance Accountability in Government Institutions (Empirical Study in Government Deli Serdang District). Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences, 2(1).

Tait, L., Merven, B. and Senatla, M. (2013), "Investigating the current and future role of paraffin in South Africa", available at: open.uct.ac.za (Accessed on 1st July 2021).

Tang, X. and Liao, H. (2014), "Energy poverty and solid fuels use in rural China: Analysis based on national population census", *Energy for Sustainable Development*, Vol. 23, pp. 122-129.

Tarekegne, B. (2020), "Just electrification: Imagining the justice dimensions of energy access and addressing energy poverty", *Energy Research and Social Science*, Vol. 70, 101639.

Timmermans, F. and Birol, F. (2021), "Time to make energy poverty in Africa a thing of the past", available at: https://www.aljazeera.com/opinions/2021/6/17/time-to-make-energy-poverty-in-africa-history (accessed on 28 August 2021).

Tucho, G.T. and Kumsa, D.M. (2020), "Challenges of Achieving Sustainable Development Goal 7 From the Perspectives of Access to Modern Cooking Energy in Developing Countries", *Frontiers in Energy Research*, 8.

Unaegbu, E.U. and Baker, K. (2019), "Assessing the potential for energy from waste plants to tackle energy poverty and earn carbon credits for Nigeria", *Int. J. Energy Policy Manag*, Vol. 4, pp. 8-16.

Usman, A., Ullah, S., Ozturk, I., Chishti, M.Z. and Zafar, S.M. (2020), "Analysis of asymmetries in the nexus among clean energy and environmental quality in Pakistan", *Environmental Science and Pollution Research*, Vol. 27 No. 17, pp. 20736-20747.

Van Niekerk, A., Kimemia, D. and Seedat, M. (2021), The No Paraffin! Campaign: A Call to Action. Academy of Science of South Africa.

Villalobos Barría, C., Chávez Rebolledo, C. and Uribe, A. (2019), "Energy poverty measures and the identification of the energy poor: A comparison between the utilitarian and multidimensional approaches in Chile", IAI Discussion Papers No. 243, University of Goettingen.

Villalobos, C., Chávez, C. and Uribe, A. (2021), "Energy poverty measures and the identification of the energy poor: A comparison between the utilitarian and capability-based approaches in Chile", *Energy Policy*, Vol. 152, 112146.

Wei, Y. M. and Liao, H. (2018), "Measurements and General Characteristics of Energy Poverty in China", In: *Energy Economics*. Emerald Publishing Limited.

Wen, Q., Hong, J., Liu, G., Xu, P., Tang, M. and Li, Z. (2020), "Regional efficiency disparities in China's construction sector: A combination of multiregional input–output and data envelopment analyses", *Applied Energy*, Vol. 257, 113964.

Wolpe, P. and Reddy, Y. (2010), "Alleviating urban energy poverty in the informal sector: The role for local government", available at: https://www.cityenergy.org.za/uploads/resource_85.pdf (Access 13 April 2024).

Yakovlev, A.A., Freinkman, L.M., Makarov, S.A. and Pogodaev, V.S. (2018), "The Elite Consensus and Regional Economic Development: The Experience of the Republic of Tatarstan [Элитный Консенсус И Экономическое Развитие Региона: Опыт Республики Татарстан]", *Economic policy*, Vol. 1, pp. 180-217.

Yang, X., He, L., Xia, Y. and Chen, Y. (2019), "Effect of government subsidies on renewable energy investments: The threshold effect", *Energy Policy*, Vol. 132, pp. 156-166.

WHO (2016), "Burning opportunity: Clean household energy for health, sustainable development, and wellbeing of women and children", available from https://apps.who.int/iris/bitstream/handle/10665/204717/9789241565233_eng.pdf?sequence=1, (Access 05 June 2020).

WHO (2018), "Burns: Economic impact", available from https://www.who.int/news-room/fact-sheets/detail/burns (Access 06 May 2020).

World Health Organization (2021), "Population with primary reliance on clean fuels and technologies for cooking (millions)", available at: https://www.who.int/data/gho/indicator-metadata-registry/imr-details/population-with-primary-reliance-on-clean-fuels-and-technologies-for-cooking-(millions) (accessed on 6th May 2022).