



Kitui Coal Mining Project Is a Disaster in the Making

By Willy Mutunga and Omar Elmawi



The exploitation of coal, a hard black rock made up of 65-95 per cent carbon that burns when set alight, has a long history going back thousands of years.

Prospecting for coal in Kenya started in 2000 and the discovery of large, commercial coal deposits in the Mui Basin in Kitui — a 500 square kilometre area about 270 kilometres east of Nairobi — was announced in 2010.

The government revealed during the recent budget reading that it has allocated funds for coal mining and there are plans to drill 20 more coal exploration wells.

Kenya is doing this just as the world is scaling down coal mining and rolling out plans to phase out coal and replace it with renewable energies. The government has already signed two concession agreements with investors and there are plans to supply coal to the proposed — and contested — 1050 MW Lamu coal plant 350 kilometres away, and to the proposed 960 MW coal plant to be established in Kitui County.

Approximately [100,000 people](#) (more than 30,000 households), primarily small-scale farmers, will be displaced to make way for the coal mining operations.

The promoters of coal mining in the Mui Basin are the government, through the Ministry of Mining and Petroleum, and private investors. The government has already awarded concessions for the four blocks available in the Mui Basin. The first one was awarded to a Chinese company called Fenxi Mining in 2011, for blocks C and D, while the second, for blocks A and B, was awarded in 2015 to a consortium of two companies, HCIG Energy Investment Company and Liketh Investments Kenya Limited. The consortium also won the tender to construct a 960 MW coal plant in the eastern part of the Mui Basin under an Independent Power Producer (IPP) framework in 2015.

The case for coal

The decision by the government to mine coal at a point when the world is fighting the effects of climate change and phasing out coal is quite surprising. Even though coal played a significant role in building the economies of many developed countries, this came at a high cost. Moreover, the technology to render renewable energy competitive was not yet available. Now it is.

So, why on earth would Kenya mine coal? The rationale is that Kenya will generate a lot of money in revenue, provide jobs, and aid manufacturing. But is this accurate?

Revenue generation

The Ministry of Energy and Petroleum [estimates](#) total coal deposits to be north of 1 billion tonnes valued at US\$75 billion (about KSh7.5 trillion). So, on the face of it, one can understand why both the national government and the county government of Kitui are keen to proceed in haste to get the coal out the ground.

However, the proponents fail to mention that since coal exploration and extraction are expensive ventures (hence the concession agreements with foreign companies), Kenya will not be receiving all of the expected KSh7.5 trillion from the extracted coal. The mining companies have to recover their upfront costs (free of any royalties) before sharing the proceeds with everyone else (government, community, etc.). This is a problem that Kenya is already facing in Turkana following the discovery of oil reserves in the Lokichar Basin, where the government and Tullow Oil now [disagree](#) on US\$2 billion in exploration costs for Tullow's six years' work in the Turkana oil fields.

The Mining Act, enacted in 2016, and the concession agreements signed in 2011 and 2015, detail how the royalties collected will be shared: 70 per cent for the national government, 20 per cent to the county government, and 10 per cent to the community. But since the concession agreements are yet to be made public, we can't tell what percentage of the total revenues from the sale of the coal will be paid out in royalties. This is problematic.

Jobs

Also causing excitement are the supposed job opportunities that the coal mining will provide. According to the [census data](#) released in 2020, 39 per cent of Kenyan youth are unemployed, four in every ten youth. The assumption is that there will be many opportunities for employment — direct and indirect — for this group.

Direct employment will be for those working in the mines, those hired to transport coal to the proposed coal plant sites in Lamu and Kitui, and those who will be fortunate enough to be employed in the power plants to process the coal.

Indirect employment will be provided by the manufacturing companies that will be created as a result of what the government and those supporting the coal project [claim](#) will be cheap and adequate power. All this is speculation.

We remain sceptical, particularly because most of these jobs, especially the high-paying ones, will be taken by expatriates from China since we lack expertise in coal mining and running coal plants.

Manufacturing

President Kenyatta has declared manufacturing one of his administration's deliverables. The [target](#) is for manufacturing to contribute up to 20 per cent of the Gross Domestic Product (GDP) by 2022; it currently represents 9.2 per cent of GDP. It is common knowledge that manufacturing is energy intensive.

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Those pushing coal [argue](#) that we need to utilise our deposits to power our manufacturing dream and enjoy the economic benefits that will ensue. However, the country currently has an overcapacity in electricity and coal does not compare favourably with other sources such as geothermal. Therefore, having a coal industry in Kitui will increase the electricity tariff, thereby exponentially increasing electricity costs for manufacturers that will be passed on to the consumer of finished goods. Moreover, our manufacturing companies won't be able to compete with imported products due to the high electricity tariffs they will face.

The case against coal

To make an informed decision about whether we should mine the coal that we have discovered in the Mui Basin, it is crucial that we look at what we have to lose if we go in that direction. Are there other means by which we could attain our ambitious goals?

Below are the reasons why the government should leave the coal in the ground.

Community opposition

Our laws are clear that any natural resources that are discovered should be utilised to benefit the people of Kenya. The Constitution of Kenya 2010 classifies minerals (such coal) under public land. Further, the law also elucidates that public land belongs collectively to the people of Kenya as a nation, as communities, and as individuals.

The community in the Mui Basin is vehemently opposed to coal mining in the region. The women in particular have raised concerns over informal land tenure rights. The community is pondering where they and their families will go when they abandon their ancestral lands to coal mining.

Women stand to lose the most if the community is evicted from the Mui Basin to give way to coal extraction. In Kenya, women traditionally have less control over land, with significant decisions being made mainly by men. They have had to resign themselves to enjoying only the user rights to the land (farming, grazing, fetching firewood, etc.)

Since the land in the Mui Basin is mostly without title, the project proponents have only sought the views of the heads of families, leaving out women who are important stakeholders and who stand to be severely affected by the proposed coal mining.

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their ancestral lands to coal mining.

We need to ask ourselves whether development that separates families, friends and clans and evicts them from their ancestral homes qualifies as sustainable development. Should development improve and enhance the standard of living of the community in the Mui Basin or should it serve to sever family ties? Is it wise to move ahead with coal mining given the human rights concerns regarding the displacement of communities and the dispossession of residents, especially women, through the loss of their informal land tenure rights?

The jurisprudence on public participation under our 2010 Constitution is abundantly clear but the people of the Mui Basin, and Kenyans in general, have yet to exercise this fundamental right and value enshrined in our constitution.

Environmental impact

The coal in the Mui Basin is close to the surface, and therefore the default mining method will be open-cast mining ([defined](#) as “a surface mining technique of extracting rock or minerals from the earth by their removal from an open-air pit”).

Inevitably, open cast mining will cause pollution, disrupt the area’s fragile ecosystem, contaminate groundwater, and cause unprecedented harm to local flora and fauna.

The [Least Cost Power Development Plans 2017-2037](#) confirm that coal mining (open-pit) has significant environmental and social impacts and questions the decision to proceed with this venture given that the coal in the Mui Basin is of a lower quality than coal imported from other countries like South Africa.

Economic viability

It’s important to note that mining in Kenya is still a nascent sector, contributing a tiny fraction — about 1 per cent — of GDP.

Global coal prices have been fluctuating wildly due to a dwindling and unpredictable market and the global downward trend in coal financing and development. As a result, over [100 banks and financial institutions](#) have announced their divestment from coal mining and coal power plants.

The Mui Basin coal is known to have a low calorific value and would thus attract a low price, making it less attractive than high-quality imported coal. It is unlikely that other coal users such as cement and steel manufacturers will find Mui coal attractive.

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Additionally, evacuating the coal in the Mui Basin for processing or export will require a significant investment. For instance, if the coal were to be utilised at the proposed Lamu coal plant, constructing the railway to the plant will cost north of [KSh290 billion](#), making the railway extension more expensive than building a coal plant in Kitui or Lamu.

In the most recently updated Least Cost Power Development Plans for 2017-2037, even the government doesn’t rank coal favourably over geothermal energy and hydroelectricity. The report

concludes that the Lamu coal plant will be severely underutilised (only 0.9 per cent of the capacity to be realised with moderate growth in demand). Moreover, this will affect the coal mined in the Mui Basin, as it will have no market to supply.

The above factors make mining coal in Kenya a risky affair that will result in stranded assets and a substantial economic burden for Kenyans.

Health concerns

A plethora of toxic minerals and heavy metals are released into the soil, air and water bodies in the process of mining coal, posing significant health concerns. Among the health impacts of coal are diseases like Silicosis, a lung disease caused by inhaling silica dust. Black lung disease (known more formally as coal workers' pneumoconiosis) is caused by inhaling coal dust and carbon that causes scarring in the lungs and impairs the ability to breathe.

[Estimates](#) show that 1,200 people in the US still die from black lung disease annually. According to a [2001 US study](#), there were higher than usual numbers of cardiopulmonary disease cases, chronic obstructive pulmonary disease, hypertension, lung disease, and kidney disease among residents who live near coal mines.

The situation is even worse in developing countries like Kenya, where regulations are lacking, and those in place favour coal proponents. This means that the impact of coal mining on health among members of the Mui Basin community members will likely be higher than what we see in developed countries.

Pollution

Coal mining causes different kinds of pollution that cause environmental, health, and other concerns. These include noise, water and air pollution.

As coal is mined, the noise can be heard from a distance of up to 10 miles (about 16 km). While one could argue that noise pollution is the least harmful environmental effect of coal mining, it causes discomfort to communities living near the coal mines and those working in the mines.

As far as water pollution is concerned, acid mine drainage — highly acidic runoff from coal stocks and handling facilities — infiltrates waterways, contaminating the local water supply. This makes the water unsafe for consumption and affects the PH balance of surrounding water bodies such as lakes and streams.

Open-cast mining will cause pollution, disrupt the area's fragile ecosystem, contaminate groundwater, and cause unprecedented harm to local flora and fauna.

Kitui County, where the Mui Basin is located, is a semi-arid region that is highly dependent on groundwater for domestic use. Once the water becomes unsafe for consumption through contamination, the residents will be severely affected. They will end up paying a fortune for clean water (by either purchasing filtered water or walking long distances to find safe water) or continue to use the now contaminated water at the expense of their health.

What is worse is that the effects of acid mine drainage sources can be felt years after the coal mine has closed and the proponents of the project have moved on to other interests.

Air pollution

One of the by-products of coal mining is coal dust, which is dirty and smells unpleasant. It is dangerous if inhaled, especially over a prolonged period. Prolonged exposure to coal dust puts one at risk of contracting “Black lung disease”, leading to lung cancer, pulmonary tuberculosis, and heart failure if left untreated.

Acid rain

One of the biggest concerns of coal mining is acid rain. The high acidity of the mine drainage remains in the water supply, even through evaporation and condensation, eventually coming down in the form of “acid rain”, thus perpetuating the cycle of pollution.

Accidents

We also can't rule out accidents; coal mines do collapse (both accidentally and due to nature-induced reasons). Collapsing mines cause thousands of deaths; China experienced [4,600 deaths](#) from coal mine accidents in 2006. We could also experience coal fires that fill the atmosphere with smoke containing carbon dioxide, carbon monoxide, methane, sulphur dioxide, nitrous oxides, and other greenhouse gases and fly ash.

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The above reasons are a cause of grave concern; Kitui County could lose countless lives to collapsing coal mines, and if coal fires were to occur, the county would stand to lose vast tracts of farmland, affecting food security.

Access to information

The belief is that coal will give a big boost to the country's development. However, the secrecy surrounding the project makes this is doubtful; in effect, the government and the investors that have mining rights in the Mui Basin have yet to make public the concession agreements they have already signed.

The community in Kitui, and Kenyans in general, have been left to speculate over the contents of the concession agreements. It is concerning that both the government and the project proponents are reluctant to make the agreements public, if indeed they are in the public interest.

Our verdict

After separating the wheat from the chaff and carefully examining the pros and cons of mining coal in Kenya, we have concluded that it would be unwise for us as a country to continue down this path. If we do go ahead with the coal project, we will be left with stranded assets and a substantial burden to add to an already struggling economy.

China is [dismantling](#) its coal plants and is likely to [sell](#) them to Kenya as new. This will happen because we have yet to see a “sweetheart” deal between our corrupt government and China that is free of corruption.

Common sense demands that we count our coal losses and move towards sustainable renewable

energies that are greener and more cost-competitive.

We as a country must resist this project by all legal means necessary. It is the only patriotic thing to do.

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