



OUR REF: **NJ/LCP/NEMA/16/2**  
YOUR REF: **NEMA/PR/5/2/14779**

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Dear Prof Wahungu,

**RE: SUBMISSION OF COMMENTS FOR THE ESIA STUDY FOR THE  
1,050MW COAL FIRED POWER PLANT IN LAMU COUNTY**

Amu Power Company Limited (“**APCL**”) proposes to develop a 1,050MW coal fired plant in the Kwasasi Area of Lamu County approximately 21km from Lamu Town. Kurrent Technologies Ltd was appointed by APCL to complete the ESIA Study Report for the necessary environmental authorization from the National Environmental Management Authority (“**NEMA**”).

APCL completed the ESIA Study in July 2016 and in accordance to Section 59(1) of the Environment Management and Co-ordination Act (“**EMCA**”)<sup>1</sup> and Regulation 21 of the Environmental (Impact Assessment and Audit) Regulations, 2003 (“**EIA Regulations**”), NEMA published a notice in the Government Gazette on 29<sup>th</sup> July 2016 and gave members of the public 30 days to submit their comments on the ESIA Study Report to its Director General to assist it in making its decision.

Unfortunately, the ESIA Report contains a myriad of gaps, shortcomings and inconsistencies that prove problematic for Kenya’s environmental interests but also with respect to compliance with Kenya environmental laws.

This cover letter contains a brief examination of the key issues of concern in the ESIA Report. The more detailed comments are attached to the letter in the same order the comments below are given.

Pursuant to Section 59(1) EMCA and Regulation 21 of the EIA Regulations, we now herewith enclose our comments to the proposed project development for consideration:

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<sup>1</sup> No. 18 of 1999.



**Comment 1: *Lack of proper public participation during the ESIA Study as required under Kenyan law***

According to the EIA Regulations, a project proponent conducting an environmental impact assessment study is to seek the views of the people being affected by the project. The process of consultation with members of the public likely to be affected by the project must take place *after* the proponent submits an Environmental Project Report (“EPR”). The ESIA Report indicates that APCL conducted public consultations between January and June 2015, submitted their EPR on September 2015 and had the Terms of Reference (“ToRs”) for the Project approved by NEMA on 26<sup>th</sup> January 2016. The TORs also specifically cite that public consultations should occur. The consultations held during the scoping stage of the project cannot amount to consultations required under Regulation 17 of the EIA Regulations.

There are strong reasons why the EIA Regulations direct public participation to occur *after* the completion of the EPR. Primarily, it is to ensure that affected parties are afforded an opportunity to learn and provide input into the intended project design and potential impacts. Examples to illustrate this are:

First, major components of the project changed from when the affected persons were consulted to when the ESIA Report was submitted to NEMA (for example the use of a dedicated coal berth at the Kililana Port and a 15km conveyor belt transportation system).

Second, information on the project and the impacts it would have was very limited, given that the EIA Experts representing APCL could not answer a number of key questions raised by members of the public. The law requires that the anticipated effects and benefits of the project be shared, without this information at the time of the hearing; one could argue that the process was flawed. Furthermore, these issues are never addressed by the ESIA Report, leaving them hanging and thus manifesting a total disregard of the public’s views.

We respectfully submit that NEMA cannot grant an EIA License to APCL given that Regulation 17 of the EIA Regulations was not followed and the participation process was not sufficiently robust to achieve its intended purpose.

**Comment 2: *Concerns related to the Resettlement Action Plan and Allocation of Land are not Addressed***

Under both Kenyan law and the African Development Bank Safeguards (the latter which APCL state that they relied on in various parts of the ESIA Report), where land is compulsorily acquired, resettlement of affected peoples must take place. It is generally best practice to have completed the Resettlement Action Plan (“RAP”) upon submission of an ESIA Report.



Additionally, the Government of Kenya has certain obligations when it comes to the allocation of public land. Specifically, public land that falls within mangroves, wetlands, riparian areas, the territorial sea, is along beaches or falls within environmentally sensitive areas cannot be allocated. The land granted for the Lamu Coal Power Plant falls within areas likely to fit into one or all of the aforementioned categories, thus the authorities mandated to protect the environment, particularly NEMA, have an obligation to ensure it is not allocated. Furthermore, there are concerns about the use of over 100 hectares for the disposal of fly ash, which is likely to leave a large environmental footprint.

NEMA should not grant a license to APCL until a full and comprehensive RAP is complete and should conduct an investigation to confirm that none of the land allocated to APCL is in environmentally sensitive areas. In the event that a license is granted, APCL must be obligated to fully utilize fly ash (100%) generated from the power generation process.

***Comment 3: Effects of the thermal effluent discharge on the marine environment and criticism cooling system technology***

According to the law, no thermal effluent is to be discharged in a manner that violates established legal standards – one of which includes a limit as to the difference in temperature as compared to the ambient water. The limit under Kenyan law is 3 degrees Celsius. The ESIA Report indicates that the project would result in a deleterious and impermissible rise of the temperature of seawater in Manda Bay. While the model selected by APCL indicates that an increase of 2 degrees Celsius is likely, the ESIA does not fully analyze the impacts this change in temperature is likely to have. This increase has the potential to raise water temperature at the surface of coastal waters more than 2 Celsius degrees over that which existed before the addition of heat of artificial origin. Furthermore, it would increase at least 50 percent of the cross sectional area and/or volume of the flow of the Manda Bay estuary (including a minimum of one-third of the surface as measured from water edge to water edge at any stage of tide) to a temperature above 28.33 degrees Celsius.

Additionally, the use of a once through cooling system, which very few coal plants are adopting, is likely to endanger marine life as a result of entrainment and impingement. This cooling water structure can cause adverse environmental impact by pulling large numbers of fish and shellfish or their eggs into a power plant's or factory's cooling system which may be killed or injured by heat, physical stress, or by chemicals used to clean the cooling system. Larger organisms may be killed or injured when they are trapped against screens at the front of an intake structure. Unfortunately, the mitigation measures provided by APCL are at best generic and not site specific, and thus defeat the purpose of properly informing NEMA on how to make a decision on this. No form of guidance on how to quantify entrainment

losses as part of the assessment is given, thereby falling short of indicating a sufficient mitigation mechanism.

To be consistent with international best practices, NEMA should not grant an EIA License until APCL provides a full site-specific, quantitative assessment of entrainment losses.

We respectfully submit that a once through cooling system is unacceptable given the fact that other models exist, such as closed forms of cooling, which reduce impacts and are consistent with best practices.

**Comment 4: *Poor analysis of alternatives and economic justification***

The EIA Regulations clearly state that an ESIA Report must take into account economic considerations and identify and analyze all possible alternatives to the proposed project. This analysis is to be objective, detailed and thorough – examining comparative project sites, designs, technologies and reasons for preferring the proposed project in its current form. The ESIA Report indicates that the main purpose of developing this project is to power Kenya’s economic growth, though it does not assess demand side management alternatives and presents false discredited statements on the alternatives.

The ESIA Report never asks the question of whether the investment of \$2 billion can be instead invested into improving the country’s energy efficiency – a critical question that it ignores. Furthermore, false statements are made about alternative forms of energy such as wind, water and solar (“WWS”). For example, the ESIA Report fails to take into account the new developments of energy storage to address the concerns APCL raises about the intermittency of WWS. It also fails to acknowledge numerous recent studies discounting all of their false statements about alternative energy forms, which show that WWS has better economic value than coal with trends indicating that their costs are reducing and will likely continue to do so. For example, the costs of solar are shown to be 20-33% times cheaper than coal, yet the ESIA fails to acknowledge this crucial fact.

We respectfully submit that NEMA should not grant an EIA license until a complete analysis of alternatives is undertaken and considered. The EIA Regulations require that a proponent undertake a proper analysis of the alternatives to the project type, design, and form. APCL have failed to undertake this full and comprehensive analysis, thus breaching the law and painting a false image of the true need with respect to coal energy in Kenya.

**Comment 5: *Segmentation of the scope of the ESIA Study understates the full impact of the project***



It is a fundamental principle of EIA law that all project components must be assessed in a single, comprehensive EIA rather than segmented into separate EIAs of narrow scope. Moreover, all the potential effects, be they direct or indirect, short or long term, must be considered too. The EIA for the project is not complete, but leaves out two major associated facilities. Contrary to the clear regulations, guidelines and performance standards, the EIA Report has vital components of the project design segmented.

First, in the details of the proposed power plant, the EIA Report cites a coal receiving system that includes a coal berth, coal handling equipment and a conveyor system approximately 15kms long. Second, the project has been granted a concession of 2,000 acres for limestone mining in Witu that shall be transported via sea to the project site for wet flue gas desulfurization. None of these components are assessed in the EIA Report and it remains incomplete until they are.

We respectfully submit that NEMA should not grant a license to this project given that a full EIA Study has not been completed for three key components – the coal conveyor system, the coal import berth and the limestone mine.

***Comment 6: Climate change impacts are undermined and inconsistent with Kenya's commitments***

The absence of a dedicated authority to oversee matters of climate change mean that NEMA plays a key role in oversight of the sector. Climate is a also core component in the definition of 'environment' in EMCA. As part of this role, NEMA should note that in the ESIA Report, the project does not take into account how exactly the carbon and GHG emissions it admits will take place, play up against Kenya's commitments under international law and it's local obligations. First, the ESIA Report does not compare the project's foreseeable climate change impacts against the National Climate Change Action Plan 2013 – 2017, which states a strong Need for Low Carbon Climate Resilient Development. Second, under international law in the form of the UNFCCC and the INDC, Kenya intends to cut emissions by 30% by 2030 – this project is an about face to that international commitment. The failure to conduct a comprehensive analysis of these two obligatory commitments is highly problematic.

Additionally, the ESIA Report presents an incomplete and misleading assessment of the project's climate impact by justifying that it will have a minimal impact on a global scale. This is compounded by the fact that it fails to conduct a proper analysis of what climate change impacts alternative forms of energy are likely to have on the environment, which is likely to be much less. The ESIA fails to inform decision-makers of the full cost of the project, which includes associated climate change damages, and may be as high as \$1.3 billion per year (8.8 million tons of CO<sub>2</sub>eq per year x \$152/ton of CO<sub>2</sub>eq).

NEMA, as the authority responsible for protecting the environment of which issues of climate fall under, should require a more thorough study of the climate change impacts likely to arise as a result of the emissions this project will generate for 25 to 50 years. A cursory examination of Kenya's obligations nationally and under international law indicates that the project may result in a number of violations.

Therefore, We respectfully submit that no EIA License should be granted on the basis that this project violates local and international commitments the Kenyan government has made.

***Comment 7: Air and noise quality is compromised and no mitigation cited***

The EIA Report alludes to the risk that emission of toxins is likely to occur as a result of the project's operations; however, it does not comprehensively cite how it will make efforts to minimize the negative impacts arising from the emissions. It also does not mention how the negative impacts of these emissions on human, vegetation and animal lives will be sufficiently mitigated.

NEMA should not grant APCL an EIA License until mitigation measures of how APCL will manage emissions harmful to human, fish and animal health are provided in detail.

According to the law, all operational activities of an industrial nature must adhere to certain limits, which on the higher side are limited to 60dB during the day and 35dB at night. Unfortunately, these limits will be exceeded if APCL proceeds with the proposed project in accordance to the manner set out in the EIA Report. While the operational noise limits are not exceeded during the day (most noise is below the 60dB), the case is not the same for at night. The nighttime noise levels range from lows of 38dB to a high of 53dB – all these exceed the most generous limits in the First Schedule of the Noise Regulations and even near the daytime limits.

We respectfully submit that NEMA should not grant an EIA License to APCL as the noise limits in the EIA Report indicate that they will exceed lawfully stipulated nighttime noise limits and cause harm to the people who live in this residential (not industrial) area without proper mitigation measures being suggested.

***Comment 8: Negative impacts on livelihoods are not sufficiently addressed***

The EIA Report fails to properly address livelihood concerns and presents an inadequate assessment of and measures to avoid and mitigate impacts on local livelihoods. It notes that environmental services may be eliminated or reduced as a result of the project, but it does not take the further required step





of assessing which services qualify as the type of “priority ecosystem services” that must be protected through adequate mitigation measures. Further, neither of these mitigation measures entails the restoration of ecosystem services for local people. Instead, they both indicate a strategy to end or reduce traditional fishing practices around the project site. This approach to mitigation is out of line with the mitigation hierarchy envisioned by NEMA, which requires avoidance of impacts to be prioritized.

The RAP also fails to take into account resettlement for other losses in the form of natural assets in addition to land that will be required for the project. This includes fishing grounds, fishermen’s landing sites, foraging territories, mangrove harvesting and conservation sites, honey harvesting areas, sacred sites, among others. Without engaging in an adequate representation of the assets of families affected by the coal plant, including fishermen, mangrove harvesters, farmers, foragers, honey harvesters, etc, a narrow and inequitable compensation will create greater poverty among those who should be the beneficiaries of the project.

Finally, the EIA Report does not take the likely impacts on fishermen into account that will result as a consequence of the project. A total of nine Beach Management Units rely on the waters near the project site, yet their livelihood interests have not been considered and no mitigation measures to reduce the impacts the project is likely to have on their economic wellbeing are cited in the EIA Report.

We respectfully submit that NEMA should not issue an EIA License to APCL since the EIA Study did not take the full breadth of livelihood concerns into account, particularly the loss of ecosystem services that is likely to be suffered by communities in Lamu. The project proponent must repeat this process comprehensively.

Additionally, this comments period is crippled by the lack of a RAP, which would help members of the public and communities understand what the mitigation measures to address the livelihood concerns are.

### ***Comment 9: Inconsistent and inadequate information in the ESIA Report***

According to the EIA Regulations, NEMA has the power to not give a license to a project proponent where it is established that the information given by the proponent in support of his application for an EIA License was false or incorrect. The EIA Report is peppered with a number of inconsistencies and may amount to incorrect information used for the purpose of applying for an EIA License on APCL’s part.

First, the exact amount of land required for the project is inconsistent. Throughout the EIA Report reference is made to the size of land required for the project, which is listed at 880 acres. However, in other parts of



the EIA Report, the land required for the project is listed as 975 acres. The true impacts of a project cannot be fully understood without properly understand the project's terrestrial reach.

Second, the exact amount of cubic meters of water per hour required to cool the plant is inconsistent. Under continuous maximum conditions, the project will use 126,504 cubic meters per hour of seawater for cooling the plant. However, in September 2015 when APCL submitted its EPR, the amount of water required for the same purpose and from the same source was three times less at 42,168 cubic meters per hour. Asides from the fact that these are excessive amounts of seawater being used to cool the plant per hour (from 42,000,000 liters to 126,000,000 liters), this information is inconsistent.

We respectfully submit that NEMA, in accordance to Regulation 28(2)(d), should not grant a license until clarity on the land required for the project and amount of seawater for cooling the plant is ascertained.

***Comment 10: Insufficient public hearing that was not in compliance with the law or best practices***

EMCA and the EIA Regulations state that a public hearing can only happen upon receipt of both oral and written comments for an EIA Report. However, contrary to the law, the public hearing by NEMA on APCL's project was held three days before the oral and written comments on the project were to be submitted.

The same law also states that the public hearing shall be conducted at a venue convenient and accessible to people who are likely to be affected by the Project. The venue, which was selected for the public hearing within the proposed site in Kwasasi area, Lamu County, is not convenient for other, affected stakeholders. The majority of the farmers and fishermen likely to be affected by the proposed project are residents of other islands, such as Pate and Lamu. Kwasasi is a remote area and not convenient nor easily accessible to a majority of the affected people. This is a major prohibitive factor, undermining the true accessibility of the stakeholders likely to be affected by this large energy project.

Finally, the EIA Regulations and international best practices require that the public hearing allows for people likely to be affected by the project and proponent who are brought together in a forum to express their opinions and offer suggestions on a proposed undertaking in order to influence the decision-making process. This process should allow for the identification of all interest groups represented; clearly state the purpose and objective of the meeting; the proponent must then be permitted to present on the project EIA; members of the public can respond after that; the proponent is then allowed to react on any of the concerns given; and, those responsible for overseeing the





public hearing are to put the comments together and present them to the proper environmental authority.

Instead, what ended up happening at the meeting resulted in the distortion of the purpose of the public hearing, which was less about the EIA Report and more about Amu Power. The County Commissioner, as presiding officer, started off the meeting by divisively asking for views from those who are “against” the project and those who are “for” it. This form of setting out the manner in which the meeting would take place immediately created an antagonistic atmosphere. Additionally, prior to taking views from the public, APCL was supposed to speak about the EIA Report – this never happened, contrary to the law. Various structural impediments served to defeat the purpose of the public hearing as envisioned under EMCA, the EIA Regulations and best international practices.

We respectfully submit that NEMA should hold other public hearings after the comments are submitted at venues accessible by all potential affected people and on a date not in conflict with religious or other rights. It should also ensure that the public hearing is conducted in line with best international practice and focuses on the EIA Report’s content and not political rhetoric intended to misguide the process.

#### ***Comment 11: Violation of the African Development Bank’s Safeguards***

Asides from the violation of EMCA and other Kenyan laws, the project is also regulated by the African Development Bank’s (“AfDB”) Environmental Safeguards given the AfDB’s involvement as a financier. Given that the Government of Kenya is contracted to receive funds from the AfDB, its Safeguards obligations fall to the Government, including NEMA who must ensure that compliance with environmental safeguards is achieved.

Overall, the ESIA falls short of compliance with the AfDB Safeguards in numerous respects.

- First, the ESIA omits critical aspects of the project from its impact assessment – such as the limestone mine and the coal conveyor belt and handling systems at the Lamu Port.
- Second, affected people were not adequately identified or consulted in Project planning, including in the development of the ESIA.
- Third, the assessment of biodiversity impacts and development of related mitigation measures by APCL are inadequate.
- Fourth, provisions to protect and maintain ecosystem services that support local livelihoods must be improved within the ESIA.
- Fifth, the assessment of pollution impacts and development of mitigation measures are inadequate.



- Finally, the ESIA does not include adequate measures to ensure benefit sharing for resettled people.

We respectfully submit that NEMA should require APCL to address each of these issues in order to fulfill its obligations to the AfDB.

### **Conclusion**

On the basis of the above comments and the detailed findings our independent research of the ESIA Report and the relevant laws, we request that NEMA **does not** grant an EIA License to APCL for this project. While a number of the concerns raised above can be corrected with a fresh EIA Study, an even large number of these concerns question the possibility of finding adequate mitigation measures without detrimentally affecting the environment.

Sincerely,

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