Dynamic sublimes as drivers of a Kenyan renewable energy megaproject

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Abstract

1. State of the art. The Lake Turkana Wind Power project in Kenya is Africa’s biggest wind energy farm and an interesting example of a high capital and potentially transformative megaproject. The study of megaprojects has come into being over the last decade drawing on fields of economics and project management studies. For example, Frick (2008) used the concept of the ‘technological sublime’ to explain the motivations and optimism in the construction of a major bridge construction in San Francisco, and Flyvbjerg later adopted the concept and introduced 3 additional sublimes, the economic, the political and the aesthetic (Flyvbjerg 2014). Thomas Frey (2016) has suggested a fifth sublime, community pride, which is the community’s love of a story about their accomplishment, which makes their community superior to others.

2. Research gap. Like many (most) other megaprojects the Lake Turkana Wind Power project has run into considerable delays and sharp criticism over the years. However, despite the delays, criticism and suggestions on alternatives the project continued. Using the framework of megaproject sublimes this paper aims to explore what has driven the planning, construction and implementation of the Lake Turkana Wind Power project up to now. Thus, the current study of Lake Turkana Wind Power project contributes to an ongoing discussion of the inherent risk of optimism bias and enchantment of ‘development’ that comes with these types of projects in developing country contexts. This is important, since despite the risks of megaprojects, they do also have trait-making potential and can influence the development of similar projects in the coming years.

3. Theoretical arguments. The framework of the megaproject sublimes provides a useful lens to ask questions about why projects become ‘mega’ and examine both the trait-making potential as well as the ‘dark sides’ of such projects. Together, the different sublimes can ensure that there exist strong coalitions of stakeholders who benefit from projects and therefore work for more such projects to happen. In order to explore the possibility of a new ‘sustainability’ sublime, a discussion on what constitutes a sublime and the role of specific actors in the distinction between sublimes is key.

4. Methods. Data from the empirical case of the Lake Turkana Wind Power project in Kenya is analysed
and interpreted according to Flyvbjerg’s four sublimes. The investigation relied on observations made
during a site visit in December 2017 and semi-structured interviews with key participants regarding
their intentions and perceptions of the planning, implementation and construction of the project. Data
was collected in the form of field notes, observations, interview transcriptions, reports, presentations
as well as news articles and promotional videos about the project. The coding and analysis followed the
framework of the sublimes, organising sublime drivers along the timeline of the project and comparing
sublime drivers and categories and how they relate to each other as well as specific actors.

5. Results & preliminary conclusions. Probing the case of the Lake Turkana Wind Power project
according to the framework of the megaproject sublimes has yielded three main insights. First, a strong
focus on the technological sublime as the main narrative of the project was identified. Secondly, the
idea of discussing a sustainability sublime brings to the forefront a debate that should bring together
some of the economic and political underpinnings of this kind of project. Third, the framework allows
an analysis of the power of different narratives in defining the purpose and boundaries of projects. This
calls for more research into the role of ‘third parties’ and other stakeholders and ideas about ‘getting
governance right’. The use of the framework prompts questions as to its strengths and drawbacks.
Sublimes are dynamic and change over time. Strategic and institutional contexts are not static over the
lifetime of a project.

Flyvbjerg, B. (2014). What you should know about megaprojects and why: an overview. Project
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Dynamic sublimes as drivers of a Kenyan renewable energy megaproject

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Abstract
Renewable energy investments are increasing rapidly in sub-Saharan Africa as policy makers try to keep pace of rising energy needs. This has led to large investments in new energy infrastructures, including renewable energy technologies such as wind turbines. The global wind industry and economies of scale push for projects to be developed on a large scale, and recently ‘Africa’s biggest wind energy farm’ has put Kenya on the map as a ‘bold and visionary’ leader in clean energy development. Across the world, the planning and implementation of megaprojects is growing, and the Lake Turkana Wind Power project in Kenya is an interesting example of a high capital and potentially transformative megaproject. This paper will use the framework of megaproject sublimes; the political, technical, economic and aesthetic motivations of the project; to explore what has driven the planning, construction and debate about the Lake Turkana Wind Power project. In doing so, it will discuss the potential for distinguishing an additional sublime, the ‘sustainability’ sublime.

Key words: Megaproject, renewable energy, dynamic sublimes, Kenya
1. Introduction

The Lake Turkana Wind Power (LTWP) project in Kenya can in many respects be characterised as a megaproject. Megaprojects are large-scale, complex ventures that typically cost a billion dollars or more, take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people (Flyvbjerg, 2017). Characterised as ‘privileged particles of the development process’ (Hirschman, 1995; in Flyvbjerg, 2014), megaprojects can indeed be ‘trait making’ in their ambition to change the structure of society.

Yet there are also many critics of megaprojects that point out that they can be seen as ‘displacements’ that transform landscapes rapidly, intentionally and profoundly in very visible ways, and require coordinated applications of capital and power (Soderlund, Sankaran, & Biesenthal, 2017). In the global energy sector, the large number of planned hydrodams and large transnational energy infrastructure projects have been shown to suffer from problems including stakeholder fragmentation, cost overruns, the risk of accidents or attacks, massive externalization of costs to third party stakeholders, concentration of wealth and corruption and inflated expectations and biased projections (Ansar, Flyvbjerg, Budzier, & Lunn, 2014; Van de Graaf & Sovacool, 2014).

Megaprojects are still being conceived of on a daily basis despite the complexity, risks and major challenges; a phenomenon that has been labelled the megaproject paradox (Flyvbjerg, Bruzelius & Rottengatter, 2003). Megaproject scholars have shown the tendency for optimism bias in megaprojects which sustain their existence despite their ‘failures’ and common pitfalls of major delays and cost increases. Using the framework of the megaproject sublimes, this paper will explore what has driven the planning, construction and implementation of the Lake Turkana Wind Power project, with particular attention to its progressive image and role as a flagship sustainability project. Expanding energy access has in the past few years become a high priority political issue and part of the core strategy for driving economic growth in Kenya (Newell & Philipps, 2016). Yet at the time of the LTWP project’s conception, the idea was brought forward to the relevant authorities as an unsolicited power project. This makes the examination of the drivers of this megaproject particularly interesting – what made it so attractive to Kenyan decision makers? The framework of the megaproject sublimes provides a useful lens to ask questions about why projects become ‘mega’, and examine both the trait-making potential as well as the ‘dark sides’ of such projects.

Section 2 explains megaproject sublimes as an analytical framework; section 3 provides a short description of the data collection, and section 4 uses the framework of megaproject sublimes (the political, technical, economic and aesthetic motivations of the project) to understand what has driven the planning, construction and debate about the Lake Turkana Wind Power project. Section 5 sums up the main findings and suggest ideas for further research.
2. Megaproject sublimes as analytical framework

The concept of ‘sublimes’ can be traced back to an eighteenth century aesthetic notion that was developed in literary and artistic works about nature. It was particularly centred on Western natural landscapes such as the Grand Canyon, Yellowstone and Yosemite, while in the nineteenth century to the present, it has been used to examine how advances in technology have been able to conquer nature and cause both fascination and terror.

Frick (2008) used the idea of a technological sublime as a simple framework to analyse the motivations, optimism and rhetoric of political leaders and participants advocating for the San Francisco-Oakland Bay Bridge. Inspired by Marx and Nye (1964, 1994), she describes in detail how the characteristics of the bridge project are interrelated and evolved during debates that centred on bridge aesthetics and function, and how the design process and outcome were shaped as a result. As Frick (2008) notes, the idea of progress creates a political dimension that can capture the imagination of political leaders and the public. This intertwines with the technological sublime and can be used as a political tool to bolster statements, increase public awareness and/or fulfil personal interests and ultimately shape the design and outcome of a project. As she notes, this political dimension is critical to generating optimism and momentum for projects.

Flyvbjerg later adopted the concept of the sublimes as drivers for megaprojects and distilled the idea into four different sublimes (see Table 1). Others have subsequently suggested additional sublimes such as the community sublime, suggested by Thomas Frey (2016) which is the community’s love of a story about their accomplishment, which makes their community superior to others.

Table 1: Flyvbjerg’s megaproject sublimes

<table>
<thead>
<tr>
<th>Sublime</th>
<th>Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technological</td>
<td>The excitement engineers and technologists get in pushing the envelope for what is possible in the ‘longest-tallest-fastest’ types of projects</td>
</tr>
<tr>
<td>Political</td>
<td>The rapture/personal satisfaction politicians get from building monuments to themselves and for their causes, and from the visibility this generates with the public and media</td>
</tr>
<tr>
<td>Economic</td>
<td>The delight/prestige business people and trade unions get from making lots of money and creating jobs off megaprojects, including money made for contractors, workers in construction and transportation, consultants, bankers, investors, landowners, lawyers and developers</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>The pleasure designers and people who love good design get from building and using something very large that is also iconic and beautiful (golden gate bridge)</td>
</tr>
</tbody>
</table>

Looking at the above table, it is possible to dig a little deeper into what defines a sublime. For example, they are attached to a certain group of actors, e.g. engineers or technologists, politicians, business people or designers and aesthetics. Furthermore, they are defined according to a certain (positive) sentiment, such as excitement, satisfaction, delight and pleasure.
Taken together, the four sublimes can be interwoven to ensure that there exist strong coalitions of stakeholders who benefit from megaprojects and who will therefore work for more such projects to happen. For policy makers, investment in infrastructure megaprojects seems particularly coveted because, if done right, such investment i) creates and sustains employment, ii) contains a large element of domestic inputs relative to imports, iii) improves productivity and competitiveness by lowering producer costs, iv) benefits consumers through higher quality services and finally v) improves the environment when infrastructures that are environmentally sound replace infrastructures that are not. However, megaprojects also have a record of going over budget, and over time. Flyvbjerg identifies this as the ‘Iron Law’ of megaprojects, and it leads to a systematic ‘survival of the unfittest’ despite the documentation of failures.

Inherent to the sublimes framework, is the acknowledgement that each new form of sublime may undermine and partially displace older versions. Furthermore, one person’s sublime may be another’s abomination (Nye, 1994). For example, environmentalists and engineers may have very different sublimes as outlined by the four sublimes by Flyvbjerg (although in fact, environmental sublimes, e.g. the awe environmentalists may have found in natural sites such as the Grand Canyon or Niagara Falls (US focused), have not been included in Flyvbjerg’s framework as it particularly focuses on built ‘mega-projects’). This has resulted in the sublimes framework being used to explain conflicts over big technological projects, by examining the motivations and interests of different groups of actors.

Using the megaproject sublimes as an analytical framework also prompts bigger questions as to its strengths and drawbacks. Gillett and Tennent (2017) have suggested that sublimes are dynamic and respond to change over time. Thus sublimes which are not evident at first, become more significant as opportunities are identified and public money is invested. The sublime framework can explain the motives for this evolution, and categorise the actual outputs and outcomes of a project, tangible and intangible. Furthermore, the strategic and institutional contexts in which projects are embedded are not static over the lifetime of a project – another reason why the dynamic nature of megaproject management must be understood in response to arising challenges. Finally, applications of the framework in other cases, e.g. by Gillett and Tennent (2017) have shown that not all of the four sublimes are applicable to every megaproject, for example the aesthetic sublime had a low applicability to a project like the 1966 world cup.

3. Data collection

Data from the empirical case of the Lake Turkana Wind Power project in Kenya is analysed and interpreted according to Flyvbjerg’s four sublimes. The investigation relied on observations made during a site visit in December 2017 and semi-structured interviews with 27 key participants regarding their intentions and perceptions of the planning, implementation and construction of the project. Data was collected in the form of:

- Field notes and observations (1 day site visit, field notes throughout interviewing period)
• 27 Semi-structured interviews (September – December 2017 – see Appendix) with project managers, engineers on site, representatives of contractors working on the project as well as numerous stakeholders in the wider energy system
• Reports and presentations (publicly available on LTWP website and presentations shared by respondents, policy documents and industry reports)
• News articles and promotional videos (youtube videos about the project, google news notifications about the project)

The coding and analysis followed the framework of the sublimes, organising sublime drivers along the timeline of the project and comparing sublime drivers and categories and how they relate to each other as well as specific actors.

4. A closer look at the dynamic sublimes

4.1. The Lake Turkana Wind Power project as a megaproject

The Lake Turkana Wind Power project is both an unprecedented private investment in Kenyan infrastructure as well as a strategic opportunity for Kenya to meet its socioeconomic development and sustainability goals (Cookson et al., 2017). The wind farm is situated in Marsabit County in Northern Kenya and has become one of the flagship projects in ‘Vision 2030’, Kenya’s national development blueprint.

The Lake Turkana Wind Power (LTWP) project fulfils the criteria of a megaproject as identified by Flyvbjerg (2014):

1. **the amount of capital investment**: The LTWP project costs run up to $690 million and is Kenya’s largest private investment to date,
2. **their large scale**: the project consists of 365 wind turbines, the largest single order of world leading turbine manufacturer Vestas’ turbines for a power project, which have been erected across an area of 162 km²,
3. **the many years they take to develop and construct**: ideas for the LTWP project were first tabled in 2006, financing was secured by 2014 and the construction on the site lasted for two years, from 2014-2016. The construction of the transmission line to connect the grid was delayed by over a year, due to various problems including the bankruptcy of a contractor. It was completed and the project started supplying electricity to the grid in September 2018.
4. **the multiple private and public stakeholders involved**: LTWP subcontractors include a number of local and foreign private companies, the public bodies involved in the negotiation of a power purchase agreement (PPA) for an independent power project (IPP) include the Ministry of Energy and Petroleum (MoEP), the Kenya Power and Lighting Company (KPLC), the Energy Regulatory Commission (ERC) and the Kenya Transmission Company (KETRACO) was responsible for the...
construction of the over 400km of associated transmission line to connect the project to the national electricity grid,

5. **the potential impact on millions of people**: The LTWP can supply up to 310 MW of power to the Kenyan national grid, around 15% of the total capacity of the grid and enough to power roughly 1.5 million homes. Before this project, only 25.5 MW of wind power capacity was installed in Kenya.

The LTWP project can be seen as a high capital and potentially transformative megaproject, not only because of the characteristics above, but also because of its role in promoting large scale renewable energy capacity in a country where expanding access to modern energy sources is high on the political agenda.

The construction on the site of the wind power project itself, from the construction of roads to the final erection of the 365 wind turbines and the building of the sub-station was heralded as ‘on time and on budget’, a feat accomplished from years of patient planning while waiting for reaching financial close on the investment itself. However, the construction activities not under the direct responsibility of LTWP, i.e. the transmission line, experienced significant delays in the following years. The final of 365 turbines which are to generate 300 MW of power for the Kenyan national grid was erected in March 2017, while the final connection to the electricity grid was in September 2018.

The grid integration delay was caused by the major delays of the 430km of transmission line to connect the project to Kenya’s national electricity grid. The bankruptcy of a contractor and challenges with the wayleaves for the transmission line led to uncertainty for over a year about the date of its completion. The national grid transmission company KETRACO officially responsible for the transmission line eventually found a new Chinese contractor to finish the work. The immediate costs of the delays were however not directly paid by the project developers, but became a cost to be shared between; the Government of Kenya, the consumers paying their monthly electricity bills, the Kenya Power and Lighting Company (KPLC), the offtaker of the wind from the project, and the investors whose returns on investment may be pushed years into the future. In fact, the transmission line was portrayed as ‘not our part of the project’ by the project owners, although they made the initial drawings and design specifications for the work to be done. This raises interesting questions as to who defines the objectives and boundaries of a project and how responsibilities are shared amongst stakeholders. There were several warnings of the risk of this delay as far back as in 2012 when the World Bank refused to provide guarantees based on their assessment of the time to build transmission lines in Kenya as well as their concern over the lack of phasing in of the large amount of power from the project.

4.2 The technological sublime

It is clear that the role of the technological sublime was high in this project from the beginning. The founding fathers were seen as ‘insane’, the wind was exceptional, and no one had ever dared to plan a project like that in such a place before. As one of the project directors explained, it took a lot of time for them to build up
credibility and convince investors and banks about the feasibility and bankability of the project. In this phase, they explained, risk mitigation was key, and it led to an extensive and meticulous planning process, where every detail was checked several times over (wind measurements, road surveys, etc). It could be argued that the meticulous planning and risk mitigation procedure led to some adjustments which had less to do with the technological sublime of the technologies, e.g. a smaller wind turbine model was chosen as to ease the transportation. While this resulted in technology choices not being of the ‘longest, tallest, fastest’ type, the project itself and its complexity remained strongly driven by the technological sublimes. As several of the interviewees noted:

‘LTWP is the most complex project of its kind in this part of the world in the last 20 years. It is innovative in the way it has been set up and developed.’ (Interview with a project director, Nairobi, February 2017)

Another respondent noted the following when asked in what ways this project is unique:

‘Whichever way you look at it, it is unique in my view at least. Technically, logistically, location, community engagement, your corporate social responsibility elements, everything. The country we are doing it in, the isolation of that area, I mean it’s actually underdeveloped. Because, literally was nothing there, there was no infrastructure, nothing.’ (Interview with a project manager, Nairobi, October 2017)

Cormack & Kurewa (2018) have pointed out that this kind of narrative of northern Kenya as an ‘empty’ space on the map has begun to change, yet projects like LTWP continue to use the isolation of the region as a strategy to make the land appear empty and investable. This strategy seems to entangle the technological sublime with both political and economic interests. The transformation of the value of the land is based on the technologically sophisticated solution of converting wind into energy and capital through cutting edge renewable energy. For the core technology partners, the wind turbine manufacturers Vestas, the project was the largest single order of turbines ever. This definitely supports the technological sublime, but is in a way entangled with other sublimes. For example, the quote below by one the project managers shows how the project was ‘sold’ to Vestas, by amongst other arguments, drawing on elements of the political sublime:

‘I said well, guys you are not seeing this project, you are not looking at the opportunity here. This for Vestas is a once in a life time opportunity. We have done projects in Australia, in the U.S, in China, but not in Africa in a location like this. This is gonna be your PR machine, during the construction of this project this is going to be you main PR machine going forward. Eventually they agreed.’ (Interview with a project manager, Nairobi, October 2017)
Furthermore, Vestas were convinced to come aboard as ‘real development partners’ on the project. Something they would not usually do when supplying turbines to other projects. This supports their ‘political’ interests in the wide media attention that the project has brought. The quote below illustrates the political value of the projects for their image:

‘[…] if you do something unique you actually establish a vehicle which you can use for your company to make a difference on this continent and Vestas has used LTWP to its benefit to a large extent.’ (Interview with a project manager, Nairobi, October 2017)

Another dimension of the technological sublime is the pleasure that the project developers express over having planned the project so well that the construction phases was completed on time and on budget. One of the project managers explained the complexity of planning this in the unique location of LTWP:

‘It’s not like I have a European project development template which I apply to this and then it works […] I mean we had to plan this so carefully because if you look at it, if you need to bring 365 turbines’ blades, nacelles, towers, associated equipment, substation, transformers, all the way from Mombasa to site. You need to plan that because, I mean, if you look at the installation crews, the cranes, everything else you need on site. I mean if your supply chain is interrupted all of a sudden, you have a hundreds of people standing idle with cranes costing 50,000 Dollars a day and stuff like that. It just can’t work. So, you need to plan this extremely carefully and you need to think it through to the extent.’ (Interview with a project manager, Nairobi, October 2017)

Internally, there was wide perception that the project has been a success:

‘[…]it turned out to work very well because we always planned one turbine per day. And it was actually one turbine per day and 365 turbines in 362 days. So, that turned out to be spot on. If you look at the beginning and you look at the end, it’s exactly one year in between’ (Interview with a project manager, Nairobi, October 2017)

4.3 The political sublime

The political sublime has been prominent in the wide media attention of the project. As ‘Africa’s biggest wind energy farm’1 the LTWP project has put Kenya on the map as a ‘bold and visionary leader’2 in clean energy development. Kenya’s national development blueprint outlines the Government of Kenya’s aspirations to transform the country into a ‘newly-industrialising, middle income country providing a high quality of life to all its citizens in a clean and secure environment.’ (see Vision 2030 website). Since the

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2 https://www.eenews.net/stories/1060044075 (accessed 06.06.2018)
2000s, Kenyan technocrats and planners have sought to emulate East Asian developmental models, and Browne (2015) has described the Vision 2030 as an ‘echo of modernist developmental approaches’ of African governments in the 1960s. The planning context has been one where a large part of the financing of the infrastructure and projects has been expected to come from the private sector in the form of both local and Foreign Direct Investment (FDI). While clean energy generation capacity is being expanded, largely through geothermal energy projects, oil exploration has also become commercially viable in Northern Kenya after Tullow Oil, a UK based firm, discovered oil in Turkana County in 2012 (Patey, 2014). In a world of increasing concerns about climate change and pushes towards ‘low carbon development’, adding 310 MW of wind energy capacity to the Kenyan grid is outlined as being expected at a national level to (Cookson, Kuna, & Golla, 2017):

- Mitigate greenhouse gas emissions equal to 740,000 metric tons of carbon dioxide equivalent (tCO₂eq) annually
- Increase national electricity supply by 15-20% (relative to 2015 generating capacity)
- Enhance reliability of the energy supply
- Stabilize energy prices

Furthermore, at a regional level, the many expected socioeconomic impacts include to:

- Create more than 2000 local jobs including 150 permanent jobs
- Mitigate human health impacts from harmful air pollutants
- Improve access to food, health facilities, and water through corporate social responsibility programs
- Improve income generating opportunities
- Improve local education

While the points above refer to other sublimes including the economic sublime, together they can be seen to reinforce the political sublime at different levels of governance. The political sublime has thus been used in order for the project to become a flagship project in the national economic development plan – Vision 2030 – an aspirational ‘blueprint’ to transform Kenya into a middle income economy. Furthermore, Cormack and Kurewa (2018) note that there is a specific narrative advanced by the consortium and its supporters about the project bringing development and stability to a long marginalised area – this has been supported by the locals who welcome the corporate transformation of the region and the opportunities it will bring, particularly in terms of job opportunities. This can be seen as part of a broader wave of infrastructure and power projects which aim to transform a previously neglected northern Kenya from a pastoralist ‘periphery’ into a productive heartland, including through the discovery of oil in the region. The focus on job creation and the specific recruitment practices of the project can also be seen to be speaking to a political (and economic) sublime of enhancing local employment.
Another interesting point to note that beyond the public media attraction regarding the project as a flagship RE project in Kenya, there is also a publicity dimension in policy and practitioner circles in the energy sector. One of the officials interviewed recounted how he experienced how Kenya and the LTWP project are being used as a best practice case at an international training course he attended (Interview 7).

4.4 The economic sublime

Economic factors were of crucial importance in the planning and financing stage of the project. The project has received attention as the largest single private investment in Kenya by four multinational companies from the UK, the Netherlands, and Denmark, as well as funding from Norwegian, Finnish and Danish international development finance institutions. A key selling point to the Government of Kenya and the offtaker KPLC was that the project could produce electricity at half the price of diesel – the main source of fuel in large parts of the region, an argument that may have reinforced the political sublimes as outlined above.

Once the finances of the project were agreed upon, a range of other economic interests were used to support the project’s implementation, including the impacts of the project for economic activities in the local ‘catchment’ area of the project and other benefits such as increased education opportunities and better health facilities. Some of the key labour statistics reported by LTWP include over 2,500 people employed overall during the construction phase, of which 75% were local (LTWP, 2017). However, during the operations phased the number of permanent jobs for locals is around 150. The distinction between ‘local local’ and ‘national’ or domestic was often made when discussing the economic interests of the project, owing to the strong political interest in the project spurring regional development in a marginalised region. As mentioned above, the idea of turning the previously unproductive region of Kenya into a place where such a valuable project as the LTWP can exist draws on motives of both the political and economic sublimes. The LTWP is projected to generate 1.6 billion kilowatt hours every year, which it will sell to KPLC at a pre-agreed tariff of 8.6 Kenyan Shillings per kWh.

The World Bank (WB) was involved in the discussions of financing the project and were to offer guarantees to the investors in the Sh66 billion project. At a certain point in time, they exerted pressure to plan the project to be a phased project. This became a contentious issue as the economies of scale and the requirements for building roads and transmission lines would still be upfront construction requirements for just the first phase of the project. In the media, the World Bank stated that the decision to withdraw was also partly informed by the clauses of the power purchase agreement that committed consumers to pay billions of shillings for electricity not used (Business Daily, 2012). This would directly contradict one of the arguments for the project - to reduce the cost of power in Kenya.

One of the project developers reflected upon how this became a contentious issue in the pre-construction phase and caused delays in achieving financial close of the project:
‘Two years was taken by World Bank who kept us hanging for 18 months and then they withdrew. Causing us to go back to resolving what they did not provide, which was not money, it was a partial risk guarantee (PRG) and a PRI, which was a political risk insurance. When they decided not to support the project, 18 months had gone by because of their due diligence and they came and they told us that we had to rethink this project, it was too big, we were going to not be able to do it [...]’

(Interview with project director, Nairobi, September 2017)

This spurred some media attention about the WB’s doubts project, as some of the citations from a 2012 news article indicate:

‘Electricity distributor Kenya Power signed an onerous power purchase agreement with a Turkana-based power producer forcing the World Bank to withdraw its backing for the project’ (Business Daily Africa, 2012)

‘Besides demand side concerns, the bank also doubted Kenya Electricity Transmission Company (KETRACO’s) ability to complete the Sh 20.6 billion transmission line between Loyingalani and Suswa in time for immediate action of Turkana wind power to the national grid. The World Bank says its experience with construction of power lines in Kenya is that it cannot be completed within the stated time, a reality that would expose Kenya Power to paying for electricity it will not be able to supply to consumers and consumers paying for what they did not use.’ (Business Daily Africa, 2012)

In response to such criticisms, the project developers, however, argued that the phased approach was not feasible - the business case only being viable with their economies of scale - and that the upfront capital cost requirements would be so high for the first phase of the project that the tariff would be doubled, and nearer to the cost of diesel than ‘cheap wind energy’. This was a key selling point of the project – the largest single private investment in Kenya – and a strong economic sublime. While the WB controversy showed the risk of high costs to the public, the project was portrayed in the media as an investment in Kenya, not a cost for Kenya. The legal issue of PPA only came to forefront when the mega delays in the transmission line became clear. Then the media reports started changing and the economic sublime got a negative characteristic, as it became public knowledge that KPLC and its consumers were to pay the bill for the delays:

‘The wind farm, the largest in Africa with a capacity of 310 megawatts, was supposed to inject its first 50MW to the national grid in October 2016. However, construction of the transmission line from Loyangalani to Suswa has been hampered by challenges, forcing

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the company to invoke a Sh700 million fine for every month its power lies idle as contained in the contract signed by the government in 2013. ‘(Standard Media, 2018a) 4

‘Consumers will also pay another Sh4.6 billion to a special fund created by the National Treasury to cushion the wind farm’s investors from losses should Kenya Power fail to pay its obligations. This will bring the total consumer costs on top of their normal bills to Sh10.3 billion. When costed, this comes to Sh0.1 per kilowatt hour (KWh) if spread across six years as per the agreement.’ (Standard Media, 2018a)

4.5 The aesthetic sublime

The data collected has not provided direct empirical findings regarding an aesthetic sublime in the LTWP project. However, there is evidence of the impressions and changes to the landscape that the project has spurred. An interesting place to explore this is in some of the promotional videos for the project on youtube. For example, Vestas has produced a video about the Lake Turkana site as the windiest place on earth, showing images of how the wind has shaped the environment of the region, and suggesting that until this project, no one knew what to do with the wind. The site has also been described as alike to a moonscape, barren and bare, and Cormack and Kurewa (2018) have indicated that this is a very different perspective on the value of the land and its historical significance. They also describe the project as a ‘grand spectacle’ and modernist, potentially appearing as an enclave. This stark contrast that the project has brought about between the high tech and modern and the traditional, pastoralist way of life definitely inspires some thoughts about aesthetic notions. However, this is not something that was explicitly discussed with respondents and therefore the investigation is not going to dig deeper into this as a driver of the project.

4.6 The sustainability sublime?

This next section 4 is dedicated to explore the idea of sustainability as a fifth megaproject sublime. The following analysis draws on ways in which respondents discussed the sustainability and progressive image of the project as a way in which to bring stakeholders together to agree on the project and its development. As already mentioned, the project represented one of the largest renewable energy projects in Africa at the time of its construction. One of the project developers shared his reflections on this during the early stages of developing the project, pre-construction phase:

“So it was perfect, everybody wanted this to happen. Because if this happened, it would just drag along many more projects. Nobody had the guts to try something as big because everybody was saying those economies are not ready for this. The fact that we made it happen has opened the doors. So it became a model of investment, not just in green

energy. The size, the sheer size of that investment was something never thought possible in these economies. So all that put it on the positive level. And this project also had another element that was seen by many; everybody was a winner. The consumer – we were bringing the price of power down, the environment, the government – exposure, suddenly for Kenya, Kenya went on the renewables map with this project. Particularly on the wind. Suddenly people said wind power, oh gosh, it’s actually possible in Africa.”

(Interview with a project director, Nairobi, September 2017)

The quote above clearly illustrates the trait making ambitions of the project. By being the first to attempt to do something in a ‘frontier’ context, the project hopes to ‘drag along many more projects’, and ‘open the doors’ for others. The quote also illustrates the use of the technological sublime, confirming their excitement about pushing the envelope for what was previously thought possible in the industry. The project director even goes on to link this to the strong positive portrayal of the project and everybody involved as a ‘winner’ – perhaps an indication of the optimism bias as a way to suppress the imminent risks of ‘somebody’ losing out, i.e. the third party stakeholder (KPLC and the GoK) who have to pay huge bills for power not produced.

Finally, towards the end of the quote, the interviewee speaks to the political sublime, mentioning that this project has put Kenya ‘on the renewable map’ – inviting to a kind of community pride about the project and its achievements. This shows how the project developers attempted to build strong coalitions – by making/selling the argument to other actors such as MoEP or GoK. This relates very well to the notion of megaprojects as ‘trailmaking’ for institutional change:

“So, bringing on board a plant with the capacity of 300 MW was going to be a real game changer. So, there was the issue of whether or not it was feasible or even desirable to have such a large capacity of wind in the system. And with KPLC being the system controller having absolutely no experience with despatching that magnitude of power. So, that was a challenge and we needed to as a regulator, we needed to speak to our peers in other jurisdictions to find out how they deal with problems like that. So that was quite a bit of capacity building that we did undergo. And then negotiating the wind PPA was also going to be the first one for us, we had not negotiated a wind PPA before. So, again in that regard we needed to look around and ask our peers in the region and in other jurisdictions, how they dealt with the issues and we got some support.” (Interview with ERC employee, Nairobi, September 2017)

According to the project developers, their large investment in planning (9 years) was critical to their ability to deliver the project on time and on budget (from their point of view). However, the quote above illustrates that many stakeholders around them were aware of the risks and even questioned the desirability of the size of the project. In order to propose a sustainability sublime, the following exercise will try to put forward a
definition that i) attaches a positive sentiment of the sublime and ii) proposes a group of actors who drive this sublime forward. The idea of ‘enchantment’ as the positive sentiment is borrowed from Cormack and Kurewa’s (2018) paper which discusses the ‘enchantment of development’ that the project has spurred. However, as the quotes above illustrate, rather than being associated to a narrow group of actors, the sustainability sublime is rather used by a coalition of actors who collectively campaign about the progressiveness of the project, building on the technological, political and economic sublimes all together. This raises the question of whether this is more of an ‘umbrella’ sublime than a separate sublime.

| Sustainability | The *enchantment* of the/a coalition who feel progress towards fulfilling ideals of sustainability and the environmental (and social) future of the Kenya and the wider world. |

Overall, the sustainability idea is part of a narrative that is driving the project, and that different actors use to push their underlying motivations, but that the project maybe also contradicts in other ways, because of its size and potential displacement and exclusionary effects (Cormack & Kurewa, 2018). The following section will explore some of these dark sides of the sublimes further.

4.7 *The dark sides of the sublimes*

Despite the attempts to sell the project as an overall win-win for all players involved, there have been some publicly contentious issues and some more underlying negative effects of the project. The following will try to outline some of these dark sides of the respective sublimes. The technological sublime has been a clear driver of the project and has been portrayed in the excitement of the project developers of completing this project. However, it has also raised a certain level of expectations and to some extent difficulties in regards to e.g. the idea of technology transfer. Expertise on the technical parts of the project has necessarily been brought in from abroad and no local or Kenyan companies were contracted to work on the wind power technologies themselves. To address this imbalance and potentially exclusionary effect, the LTWP project has developed a rather extensive practice of recruitment of local workers for unskilled and casual labour opportunities and eventually for some jobs in management of the site. Furthermore, training programmes have been integrated into CSR activities and the upskilling of Kenyan engineers is part of Vestas’ 15-year service contract.

Cormack and Kurewa (2018) illustrate how the technical installation and potential profits of the project highlight the relative poverty of the concession area. This can be characterised as the dark side of the economic sublime because it creates such a stark contrast between the project selling clean electricity to the national grid and the local communities not being able to afford to connect to the grid. Furthermore, the
amenities available to those working at the village camp are ‘heavenly’ compared to the lack of power and running water in the nearby Loiyangalani town. The project owners are aware of this paradox, but say they can’t replace and do the job of local government! There is also a wider exclusionary effect on local community as the ‘empty’ and ‘unused’ land that the project was built on was in fact ancestral land. Local and international critics of the project hold that LTWP has obtained land without informed consent and has failed in its duty of case to resettled and indigenous populations. In this view, the project has exploited local people, who will be left out of the profits from this development. A court case has been running for years now as to whether the land lease that LTWP was given was legal or in fact does not follow the spirit of the new constitution of Kenya which has tried to strengthen communally held land tenure. However, the project developers continue to argue that the project site is not restricted to access except for the site village where LTWP employees live and work. The communities are free to roam the land where the turbines have been put up and the project holds information days once a year where they invite the local community to learn about the project and technology and ensure

Despite the attempts to obtain an ethical and social licence to operate, there has been widespread use of a rhetoric within the project that portrays the area as an unproductive, unpopulated, ‘like the moon’, rocky arid desert – a frontier landscape – waiting for these modernist technologies to come and harness a previously unused resource. While this builds into the idea of using the wind as a sustainable and unlimited resource, it simultaneously devalues the existing use and significance of the land and is a dark side of the technological sublime that should not be ignored.

Ultimately, the sustainability sublime captured the underlying political and economic motives to showcase this large investment for Kenya – unprecedented confidence and money coming in to build something valuable and sustainable. However, the risk of costs for the GoK and citizens was overlooked when the government and KETRACO were made liable to pay fines for power that could be produced before the project was finalised. This cost only became apparent when the first delays were publicised and after which the LTWP project has taken actions to appear fair and not wanting to burden the citizens. However, the rhetoric advanced in interviews that ‘this was not our part of the project’, or the idea that there should be more gratitude to those made this project advance, do not necessarily respect the wider responsibility of the project and how their choices have impacts beyond the ‘boundaries’ of the project:

‘There are so many silent voices in the Government and private sector who have gone out on a limb – who believed in this project and wanted it to succeed for the future of this country. But no one has thanked them. They wish to remain in the shadows out of fear of being seen to be compromised.’ (Standard Media, 2018b)³

5. Conclusion

Probing the case of the Lake Turkana Wind Power project according to the framework of the megaproject sublimes has yielded a number of insights. Firstly, the aim was to explore how the LTWP project came into being as a megaproject. This was illustrated in the analysis of the individual sublimes and how they are used to reinforce each other, each one driving the project forward in terms of scale and impact. The idea of the sustainability sublime, either as an umbrella sublime or an individual sublime, illustrated how the various drivers become entangled and a coalition emerges around the ‘goodness’ of the project. Secondly, the idea of the sustainability sublime also articulates and capitalises on the traitmaking potential of megaprojects with a logic of “the bigger the project, the bigger the impact”. However, as the section on the dark sides of the sublimes illustrated, megaprojects are also inherently political and prone to criticisms and conflicting interests. The sublimes framework enables some of these contrasts to be uncovered and how certain ‘drivers’ may capture and try to exclude opposing voices.

The strong focus on the technological sublime as the main narrative of the project can lead to suppressing other perspectives or reasoning for or against the project. As the project gained support, narratives about the size and sophistication may have created exclusionary effects and distracted from some of the risks including the cost born by consumers in case of delays in the transmission line. The strength of the technological sublime is particularly clear when the concerns by the World Bank were swept away. While there is not necessarily resistance to the existence of the project itself, perhaps more space should have been allowed in questioning about the way it was planned and implemented – how could any exclusionary effects have been avoided? This raises interesting questions as to how such projects may avoid getting so big (mega) or becoming a ‘technologically sophisticated enclave’?

The analysis has also prompted questions as to the strengths and drawbacks of the framework. Not all sublimes were applicable in this case and data set, yet it lends itself to a discussion of other drivers such as sustainability. Overall, the analysis has attempted to illustrate that sublimes are dynamic and change over time, yet they also reinforce each other and gain momentum and create lock-ins. The paper acknowledges that strategic and institutional contexts are not static over the lifetime of a project and raises questions about how to address the issue of blurred project boundaries – e.g. the transmission line as ‘not our part of the project’ – how do you delimit and define this? There is a certain permeability of project boundaries in megaprojects – who defines their purpose and scope? With so many actors involved in the debate regarding such megaprojects it is not easy to set clear ‘lines’.

Overall, the idea of discussing a sustainability sublime brings to the forefront a debate that should bring together some of the economic and political underpinnings of this kind of megaproject. These sublime drivers and their directionality or normativity will influence the traitmaking potential of the project, particularly with regards to institutional change. The role of the enabling environment could therefore be
highlighted. As Hansen et al (2018) have suggested, the current framework in Kenya seems rather to be
designed thinking of the technological differences in the energy sector, rather than the size of the projects.
As a result, some smaller scale projects may be overlooked or not supported because large scale wind
projects are promoted disproportionately. This underpins the idea that the choice of the size of projects is
important, and Hansen et al (2018) suggest that this may even be more important than the choice of the
‘shape’ of the technology when it comes to choosing future pathways in the energy system. This may have
ramifications that range from prospects of producing technologies locally, using local services for
constructing facilities and involving local labour in operation and maintenance of energy systems. The ‘size’
choice is therefore at the core as a defining element of alternative renewable electrification paradigms,
regardless of whether such electrification is achieved by harnessing the sun, wind or water flows.

Finally, the framework allows an analysis of the power of different narratives in defining the purpose and
boundaries of projects. This calls for more research into the role of ‘third parties’ and other stakeholders and
ideas about ‘getting governance right’. By treating projects as ‘complex tasks’ where the technical
difficulties for solving the task are emphasized, it is too easy to turn project management into a simple
implementation game focused on the trade-off between time, cost and quality (Andersen, Soderlund, &
Vaagaasar, 2010). However, the complexity of projects viewed as ‘emergent relationships among
stakeholders’ is another perspective that acknowledges that activities are not always clear and that involved
parties perceive things differently or may even have conflicting goals. The politics of projects is important
and has a direct impact on ‘actions’ – skewing project management to a ‘divide’ and ‘control’ approach –
often ignoring a more complex conceptualisation that reflects the inherent social and technological
complexity and reality. An obvious alternative to megaprojects is to implement them as smaller piecemeal
initiatives - as a series of small scale projects - and question why the economic rationality of economies of
scale always win? What are the advantages of scale and scope?
References


## Appendix

List of interviews

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