WATER, SANITATION AND HYGIENE FINANCE (WASH-FIN) KENYA

COVID-19 UPDATE 3: Electricity Costs for Water Service Providers

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INTRODUCTION

Kenya recorded its first case of COVID-19 on March 12, 2020, prompting the government to institute immediate containment measures meant to protect the public.[1] These containment measures have had adverse effects on the different sectors of the economy, including the water and sanitation sector.

In the water sector, this has been exacerbated by government directives to Water Service Providers (WSPs) against disconnecting water over unpaid bills. Based on an initial assessment by the Water Services Regulatory Board (WASREB), revenue collection by WSPs dropped by 50 percent[2] or more of pre-pandemic levels,[3] limiting WSPs' ability to pay for key inputs, with electricity being one of the critical expenses. Raw water requires treatment and eventually conveyance before being delivered to users. In this energy-intensive process, electricity is needed to operate pumps and other water treatment equipment. Electricity accounts for 30-45 percent of the total operational cost for all WSPs in the country.[4] In order to keep water services running, government directed the Kenya Power and Lighting Company (KPLC) not to disconnect WSPs' electricity. This has given relief to the WSPs, although they are continuing to accumulate arrears, which ultimately must be paid. How are the WSPs managing these electricity bills and what impacts are they having on their operational efficiencies? Are there ways in which the electricity bills can be better managed now and in the future? This policy brief attempts to answer these questions in order to contribute to ongoing discussions on how to ensure continued delivery of WASH services during and after the COVID-19 pandemic. The brief is based on interviews undertaken by USAID's Water, Sanitation and Hygiene (WASH-FIN) Project Kenya with five WSPs that usually have high electricity bills—Thika Water and Sanitation Company (THIWASCO), Mombasa Water and Sanitation Company (MOWASCO), Nakuru Water and Sanitation Services Company (NAWASSCO), Malindi Water and Sanitation Company (MAWASCO), and Nzoia Water and Sanitation Company (NZOWASCO).

THE WSP ELECTRICITY CHALLENGE

The WSPs indicated that their monthly electricity bills range from KES8.5 million (USD79,800[5]) for NZOWASCO to KES24 million (USD225,300) for NAWASSCO, accounting for between 30 to 63

[1] Executive Order No. 2 of 2020 issued by President Uhuru Kenyatta provided a platform to address the national emergency efforts due to Covid-19.

[2] Joseph Muchiri, "Firms ask for Sh1.7 billion to keep taps flowing amid Covid-19 crisis," *Standard*, April 10, 2020. https://www.standardmedia.co.ke/article/2001367571/firms-ask-for-sh1-7-billion-to-keep-taps-flowing

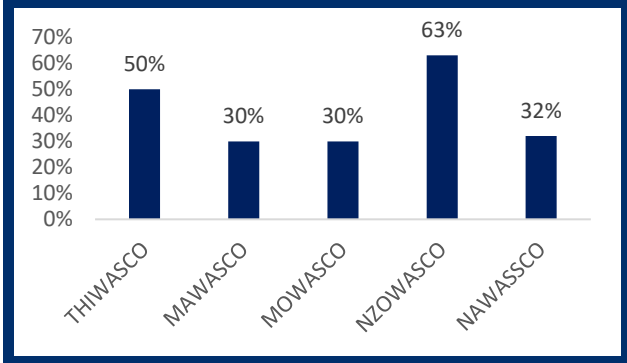
[3] USAID WASH-FIN Kenya. WSP COVID-19 Financial Stress Testing and Mitigation, June 2020.

[4] Water Services Regulatory Board (WASREB), 2020. A performance report of Kenya's water services sector – 2018/19.

[5] USD=KES 106.5 Central Bank of Kenya rate at time of survey

percent of monthly operation and maintenance costs (Figure 1). This is a substantial proportion, with that for both THIWASCO and NZOWASCO being very high. This is because both WSPs have systems that are entirely dependent on single or multiple stage pumping along the entire network from treatment works to customer connections. In the case of THIWASCO, they also pump sewage and run several borehole sources, which rely entirely on pumping. Disconnecting power for non-payment of electricity bills would therefore have significant impacts on water supply in their service areas and on the fight against COVID-19. This is particularly so as only one of the five WSPs occasionally uses generators as an additional energy source, whilst the rest are solely dependent on the main grid supply from KPLC.

Figure 1: Monthly electricity bills as a percentage of operation and maintenance costs (%)

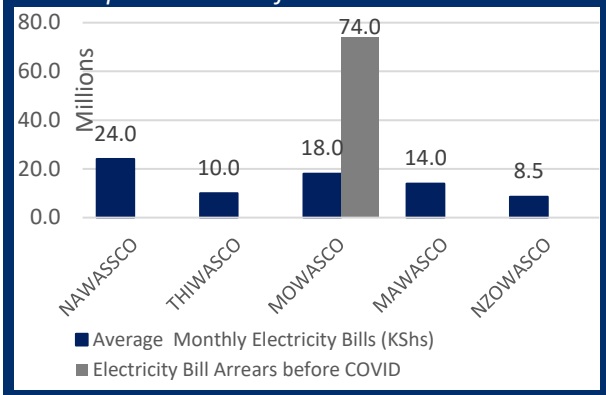


ELECTRICITY BILLS ARREARS

At the time of the survey, the five WSPs had accumulated a total of KES148.5 million (USD1.39 Million) in arrears in unpaid electricity bills. Mombasa Water accounted for the bulk of these arrears as they had previous arrears totaling KES74 million (USD695,000) (equivalent to four months) and had also not paid their most recent bill, which they estimated at KES18 million (USD169,000). The other four WSPs did not have any prior arrears and the amounts shown were for their most recent billings (Figure 2).

These results confirm a finding that the WSPs generally try to pay their electricity bills on time. Amongst the five WSPs, one indicated that under

Figure 2: Average monthly electricity bills and arrears pre-COVID-19 for selected WSPs



normal circumstances, they pay their power bills on time; two indicated that they generally pay on time but sometimes face challenges; and the last two indicated that even in normal circumstances, they struggle to pay their electricity bills, but rely on support from the county government or overdraft facilities to meet this obligation. This ability to pay their electricity bills on time could in part be explained by the fact that over the years, the WSPs have established informal agreements with KPLC, allowing them to make regular phased payments and thereby avoiding disconnection.

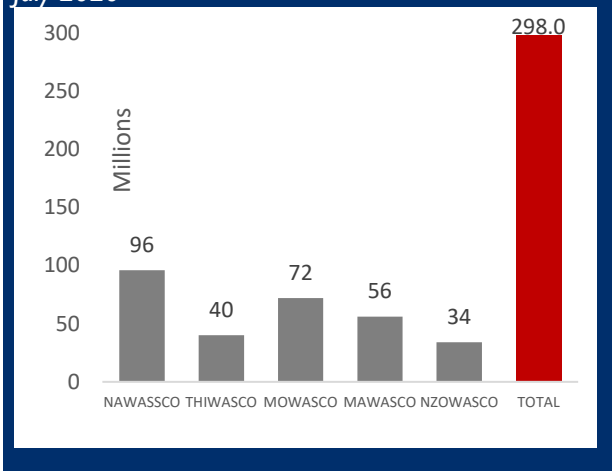
Whilst the directive to KPLC not to disconnect the WSPs is helpful, it is nonetheless not a viable long-term solution as the WSPs are continuing to accumulate these bills, which will have to be paid. Assuming a consistency on the WSPs' reported average monthly electricity bills and assuming they are not paying anything at all to KPLC, then by July 2020, the WSPs would be owing jointly KES298 million (USD 2.8million) (Figure 3).

This is a significant burden, which will only continue to grow and therefore requires sector stakeholders to find ways of addressing this challenge.

MANAGING ELECTRICITY BILLS

Under the present circumstances, all possible options and lessons from other countries on how WSPs can reduce their power bill arrears need to be sought to avoid further accumulation of debt

Figure 3: Projected electricity bills arrears until end July 2020



and eventual disconnection. In Italy[6], for instance, the local electricity utility has extended the grace period for arrears by (i) delaying the payment of invoices accrued between the start of the pandemic in March 2020 through June 2020 by ninety days; (ii) and dividing repayments into 12 monthly installments. By spreading these arrears over time, WSPs can be in a better position to clear these pending bills while sustaining operations. This is similar to the phased payment being practiced with KPLC and outlined above. However, as these agreements are informal, KPLC does occasionally disconnect the WSPs when it has its own financial pressures. There could therefore be value in looking at formalizing this arrangement, especially if COVID-19 persists and as part of a longer-term strategy for dealing with national emergency situations. This could be part of a roadmap for clearing arrears without crippling the operations of either the WSPs or KPLC and could include debt swaps between WSPs and KPLC as they owe each other.

The government could also consider subsidizing these arrears to reduce the burden for the water companies.

MANAGING ELECTRICITY COSTS

Apart from managing their electricity bills, WSPs should also consider ways to reduce their electricity bills. The following measures could help:

- Encouraging WSPs to carry out energy audits to reduce electricity consumption or increase efficiency whilst contributing to longer-term environmental sustainability.
- Exploring different approaches to finance retrofits that reduce energy consumption. A number of models have been used in the United States and elsewhere, which include: (i) the creation of energy service companies (ESCOs) that develop, design, build, and arrange financing for projects that save energy, reduce energy costs, and assume performance risks[7]; (ii) ESCOs can also potentially enter into energy savings performance contracts (ESPCs) in which a public agency agrees to pay a fixed amount in advance for performance based improvements that improve efficiency based on pre-defined indicators[8]; and (iii) encourage energy efficiency improvements through "pay-as-you-save (PAYS)" contracts or Energy Service Agreements (ESA) in which cost savings are used to finance efficiency improvements and repayment based on realizing electricity savings. These contracts require stricter monitoring to certify that the estimated savings are achieved. WSPs could enter into one of these contractual arrangements with KPLC or a private party.[9]

[6] Llibert Teixidó, "Naturgy allows to postpone the payment of electricity and gas bills to homes," *The Vanguard*, March 25, 2020. https://www.lavanguardia.com/economia/20200325/4893858026/naturgy-factura-luz-gas-aplazar-pago-particulares-hogar.html

[7] U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy website, July 7, 2020. https://www.energy.gov/eere/femp/energy-service-companies-0

[8] Corrie E. Clark, "Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs)," everycrsreport.com, November 23, 2018. https://www.everycrsreport.com/reports/R45411.html

[9] Correspondent, "Kenya Power Commits Sh700 Million for Renewable Energy in Off-Grid Stations," *Capital Business*, September 5, 2019. https://www.capitalfm.co.ke/business/2019/09/kenya-power-commits-sh700-million-for-renewable-energy-in-off-grid-stations/

- As water and sanitation are an essential input into the fight against COVID-19, the ongoing discussions for KPLC to consider setting up a preferential electricity tariff for the WSPs could go a long way in freeing up financial resources.[10]

The COVID-19 pandemic has created some unprecedented challenges for WSPs that were already relatively weak financially. It has, however, also presented an opportunity for the water sector to rethink how it delivers water and sanitation services, and, how to optimize available resources whilst also making service providers more resilient to future uncertainties. The need for continued electricity supplies presents one such opportunity that must be explored.

WATER, SANITATION, AND HYGIENE FINANCE (WASH-FIN)

The five-year Water, Sanitation, and Hygiene Finance (WASH-FIN) program is funded by the United States Agency for International Development (USAID) and began in October 2016. Implementation is led by Tetra Tech with support from Open Capital Advisors, Segura Consulting and Global Credit Rating. It is managed by USAID Water Office with support from the Global Climate Change Office. With the current reorganization of USAID, the Water Office has been moved under the Resilience and Food Security Bureau. WASH-FIN seeks to close financing gaps to achieve universal access to water and sanitation services through sustainable and creditworthy business models, increased public funding, and expanded market finance for infrastructure investment.

[10] Vitalis Kimutai, "Kenya Power urged to lower electricity costs to water companies," *Daily Nation*, January 24, 2020. https://www.nation.co.ke/counties/bomet/Kenya-Power-urged-lower-electricity-costs-to-water-firms/3444846-5430404-64x7ll/index.html