Third Party Evaluator's Opinion on
Mombasa Diesel Generating Power Plant Project

Dr. Wilson S. K. Wasike
Senior Policy Analyst
Infrastructure and Economic Services Division
Kenya Institute for Public Policy Research and Analysis (KIPPRA)

Relevance: At initiation, Kipevi I project was highly relevant as it was catalyzed by macro-policy reform priorities, national energy policy, electricity sector conditions (including the emergency context of load-shedding due to severe drought), and international donor priorities. Prior to the project, Kenya relied primarily on concessionary funding from multilateral and bilateral agencies to finance new power investments. In the 1990s, however, the global donor trend shifted toward private power infrastructure. In 1996 when Kenya officially liberalized power generation as part of power sector reforms, the sector was dominated by hydropower. All economically viable hydro sites had, however, been exploited and therefore electric power supply diversification and increase became necessary for drought mitigation and to meet growing demand. Given that Kenya imports all oil products, the project is optimally located in Mombasa.

Currently and in the future, the project will still be relevant to meet Mombasa's steady growth in its demand for electricity consumption averaging over 5% p.a. since 2000. The project is contributing significantly towards reduction of Kenya's dependence on electricity generation from hydro resources through injection of increased electricity into the national-grid system to which the plant is inter-connected. Furthermore, the improved electricity production mix is being generated from relatively clean diesel power generation. Kenya seeks to reduce dependence on hydropower that is highly vulnerable to climate change and variability.

Impact: The project has augmented electricity supply. The 75 MW helped the country plug an acute power shortage, i.e. the plant amounted to 28% and 34% of total thermal/geothermal generation in 2001-2002 and 2002-2003, respectively and up to 10% of the gross annual energy requirement in 2002-2003. Secondly, the project has had salutary impact of reducing Kenya's dependence on hydro electricity generating capacity. When the project began in 1995, Kenya's reliance on hydro sources in its electricity generation was over 90%, but currently the proportion of electricity generated through hydro sources is 64% or 597.5MW; thermal and geothermal power account for 212.5 MW (23%) and 127.0 MW (13%) respectively. Kipevu I has since been followed by Kipevu II, Westmont (46MW), Iberafrica (56MW), OrPower4 (13MW) power projects.

Although an expected reduction in power tariffs due to the project – as it was significantly less expensive than emergency power generation procured at US$0.30-.40/kWh – has not been realized, many stakeholders believe the project forestalled an increase in tariffs. Kenya's tariffs have remained high compared to some countries i.e. USCents 7.6 per KWh as compared to USCents 3.5 per KWh in Uganda. Kipevu's inability to lower Kenya's average power tariffs is largely explained by the capacity factor and non-project-level factors including low investment, high cost of fuel type, utility-operational inefficiencies, and growing demand. Lastly, the project has consistently performed well in environmental audits. Yet there is need to address effluent water quality treatment and the "human error" associated with operating the governor.