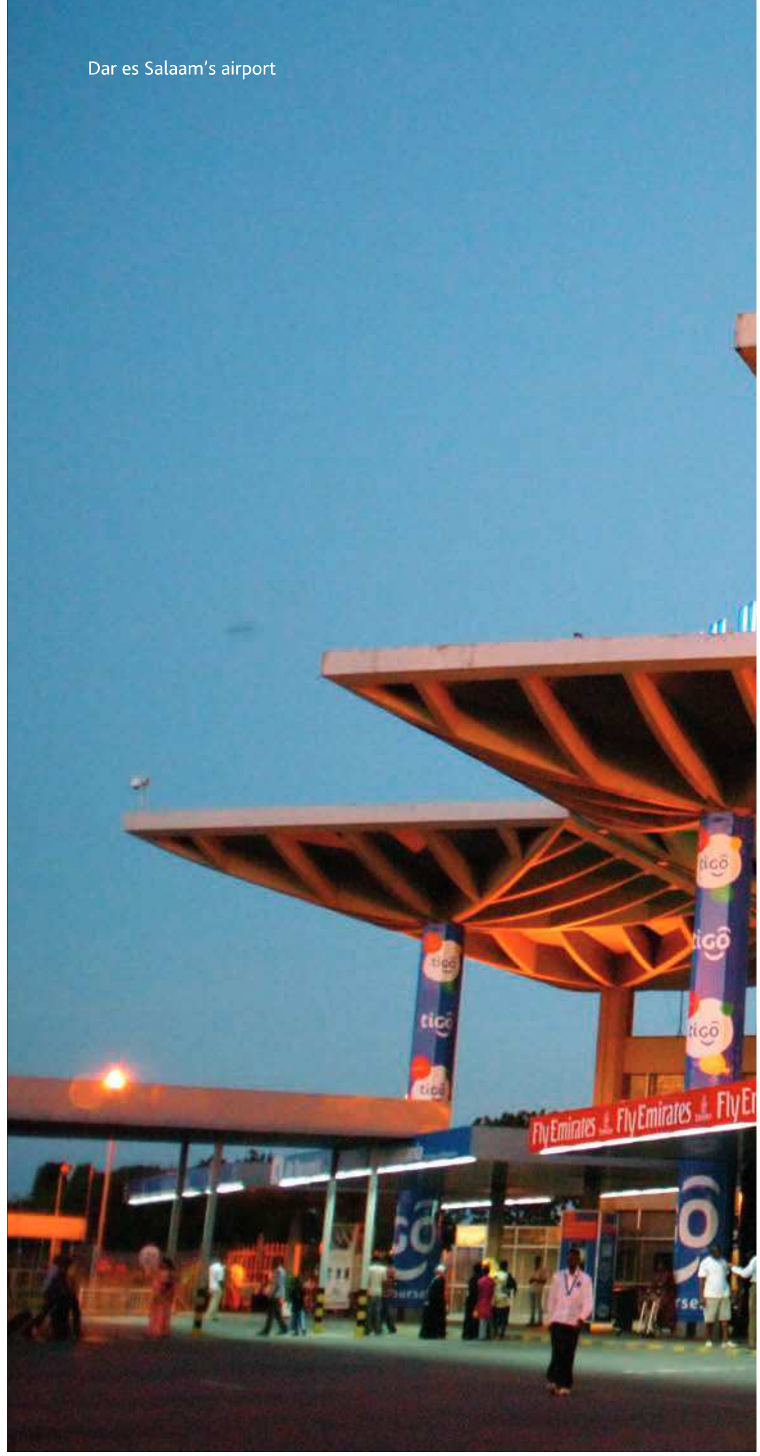

Dar es Salaam's airport

PROJECTS ON THE MAP

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PHOTO BY ROLAND VIA FLICKR

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This East African country's economy is poised to take flight.

BY CLAY DILLOW

Downtown Dar es Salaam

Energy has been a burden for Tanzania—a costly one.

Now the country's recent natural gas finds are driving demand for improved energy infrastructure. As a result, the energy sector could transform from burden to benefit. To get there, project sponsors first will have to find—and develop—the project management talent they need.

Having outgrown the patchwork energy infrastructure established in the decades following independence from Britain in 1961, Tanzania struggles with a national power grid that serves fewer than one in five Tanzanians—and even that limited capacity is unreliable.

The government and its partners intend to rectify the situation with a vast, rapid expansion of Tanzania's grid and other energy sector infrastructure in the next few years. Massive natural gas finds in Tanzania and neighboring Mozambique could transform East Africa into an energy hub, but the effects will be felt far beyond energy. Thanks to the discoveries, Tanzania could also become a magnet for foreign investment in projects ranging from highway networks to drilling and mining operations to a massive new port facility that is expected to be East Africa's largest.

"Tanzania and Mozambique could have far more gas reserves than any other place in the world," says Buchizya Mseteka, an Africa policy expert and director and senior analyst for Leriba Consulting, London, England. "There's a lot of economic movement right now. It's attracted a lot of investors, and a lot of infrastructure is going up. But the energy levels have remained the same. And because of this huge

Tanzania's economy has enjoyed steady growth. From 2002 to 2013, its GDP growth rate averaged

7 percent.

By contrast, South Africa, often considered the economic powerhouse of sub-Saharan Africa, grew by just **3.2 percent** a year from 1995 to 2013.

demand, the government has now prioritized sorting out the energy sector."

GROWTH CHARTS

While the global economy experienced fits of turmoil over the past decade, Tanzania's economy has enjoyed steady growth. From 2002 to 2013, its GDP growth rate averaged 7 percent. By contrast, South Africa, often considered the economic powerhouse of sub-Saharan Africa, grew by just 3.2 percent a year from 1995 to 2013.

China has played an increasingly vital role in Tanzania's economic health, becoming its biggest foreign investor. Ties with China that date to independent Tanzania's formative decades have facilitated significant investment from Chinese companies as the Asian country's expanding economy has prompted it to seek resources abroad.

Tanzania's economic growth has been reflected in a range of sectors. The Tanzanian tourism industry has expanded rapidly in recent years and now employs nearly twice as many people as nearby Kenya's. The communication sector's contribution to GDP has doubled since 2008, helping to fuel other segments of the economy through applications like mobile banking.

No sector stands to benefit Tanzanians or the Tanzanian economy like energy. "The Tanzanian energy-supply situation hasn't been matching the growth of the economy, so they now have to play a catch-up game," Mr. Mseteka says.

The government aims to win that game through the country's vast untapped energy wealth. As a result, a large number of Tanzanians could plug into the grid for the first time—and see an end to the blackouts that plague the nation. Moreover, the country could turn into an energy-exporting behemoth—potentially becoming a leading exporter of liquefied natural gas by 2025.

The centerpiece of the Tanzanian government's effort to double the country's power-generation capacity to 3,000 megawatts by 2015 is a 532-kilometer (331-mile) natural gas pipeline running from Mtwara in the southeast to Dar es Salaam, the nation's largest city, in the northeast. The US$1.2 billion project promises to drastically alter the energy and economic landscapes. When the Chinese-built pipeline is completed in the second half of this year, it reportedly will cut the cost per kilowatt hour from roughly US$0.40 to about US$.07, drastically lowering the cost of doing business while easing energy demand.

TALENT SEARCH

Along with many other mining, drilling, transportation and energy transmission initiatives either breaking ground or slated to begin, the pipeline project stresses the need for another kind of pipeline: project talent. Project practitioners bemoan a lack of project management expertise in Tanzania, particularly in the energy sector.

"There are few institutions which offer training in project management," says Mugisha Philip Bisanda, PMP, a technical project manager at Nokia

Tanzania at a Glance

Population:
47.8 million

Size:
947,300 square kilometers
(365,755 square miles)

GDP:
US$28.2 billion
(2012)

GDP growth rate:
6.9 percent
(2012)

Main industries:
Telecommunications, banking, energy, mining, agricultural processing

Gross national income per capita:
US$570

Solutions and Networks in Dar es Salaam. “Yet the demand is growing as more organizations are becoming more and more aware of the project management discipline and its value. This is evident from the increasing number of job adverts for positions requiring PMP-certified individuals.”

Companies operating in Tanzania are meeting that demand by importing their own project management talent. Jose Yanez, PMP, who works as a senior project coordinator handling construction projects for Halliburton in sub-Saharan Africa, has been in Tanzania for about two years. While he says many project management practices are generally understood as beneficial, they are only now starting to be applied to projects there.

“In my opinion, the project management industry here is just beginning,” Mr. Yanez says. “Many people are eager to learn about it, and some private institutions offer training for it. But most of the current certified project managers that I have met are from abroad like me.”

The challenge for the Tanzanian government

PHOTO COURTESY OF WARTSILA CORPORATION

Practitioner Perspective *Which skills should project*

“It is very common to have seasoned engineers managing projects, which leads to various issues. Usually scope doesn’t change that often, but the how and when that scope is achieved are proving to be the biggest challenges to most projects in Tanzania. Schedule and cost management are the weakest areas.”

—Harold Tibanyenda, PMP, customer project manager, Ericsson, a PMI Global Executive Council member in Dar es Salaam

“Stakeholder communication is not to be confused with general items such as report writing and presentations. From experience, I know that the Tanzanian environment requires continuous communication with low-tech means. Face-to-face interactions are key to making things happen.”

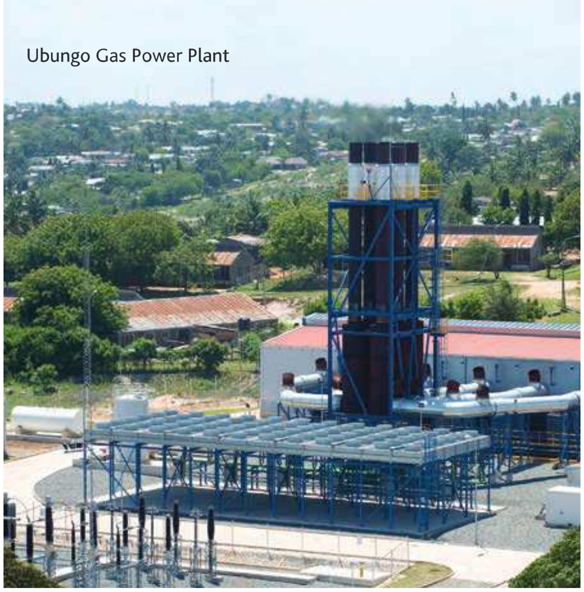
—Niel van der Vyver, PMP, program manager, RedKnee, Johannesburg, South Africa, who has worked on projects in Tanzania

“Stakeholder management and quality management are undervalued, but I believe versatility is still the most important skill you can have.”

—Jose Yanez, PMP, senior project coordinator for sub-Sahara Africa, Halliburton, Dar es Salaam

“Projects here are often implemented under challenging conditions, particularly with regard to procurement, due in part to bureaucratic processes, supply chains marred by corrupt practices and resistant stakeholders. Communicating the big picture is often overlooked. Allocating ample time to analyzing those affected by the project, developing means of communicating with each segment and gathering informative feedback will create greater chances of buy-in—which subsequently contributes to higher chances of sustaining project gains.”

—Neema Ndunguru, PMP, project manager, Investment Climate Facility for Africa, Dar es Salaam



Ubungo Gas Power Plant

over the next few years is to ensure that the rapid energy sector expansion is properly managed despite a lack of deep project management experience. "They need the foreign investors with the financial means and the technical know-how to come and help," Mr. Mseteka says. The long-term success will be measured by the government's ability to create win-win scenarios in which the investor, the government and the people of Tanzania all benefit, he adds.

"They have everything to gain," Mr. Mseteka says.

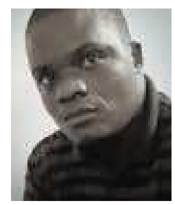
managers focus on to improve success rates in Tanzania?

"Most projects do not meet specified budgets, and there's often a failure to use cost management tools and techniques, such as earned value management. But as organizations start to embrace project management, more graduates are thinking of this as a career. Academic institutions are adding it to their curriculum, which will foster a greater understanding of project management tools and techniques in the next five years."

—Leonancy Francis, CAPM, PMP, systems analyst, National Microfinance Bank, Dar es Salaam

"Culture at times creates challenges, especially language and generally how Tanzanians operate in their communities. Remember, we were previously a socialist state, so that mindset hasn't completely changed. Yet most investors come from capitalist backgrounds. This is a society where people share basic things such as sugar or salt, where your friends and family will cover 90 percent of your wedding party costs. This kind of culture is strange to most investors, but learning to live in such a community and adapting to the norms often pays off. In the end, a project manager needs the maximum support one can get from all stakeholders involved."

—Mugisha Philip Bisanda, PMP, technical project manager, Nokia Solutions and Networks, Dar es Salaam



"Support for project management is weak both in terms of training and general practice. The majority of project managers have other qualifications, but they practice project management through experience. And while a large number of project managers are experts, knowledge transfer is not strong."

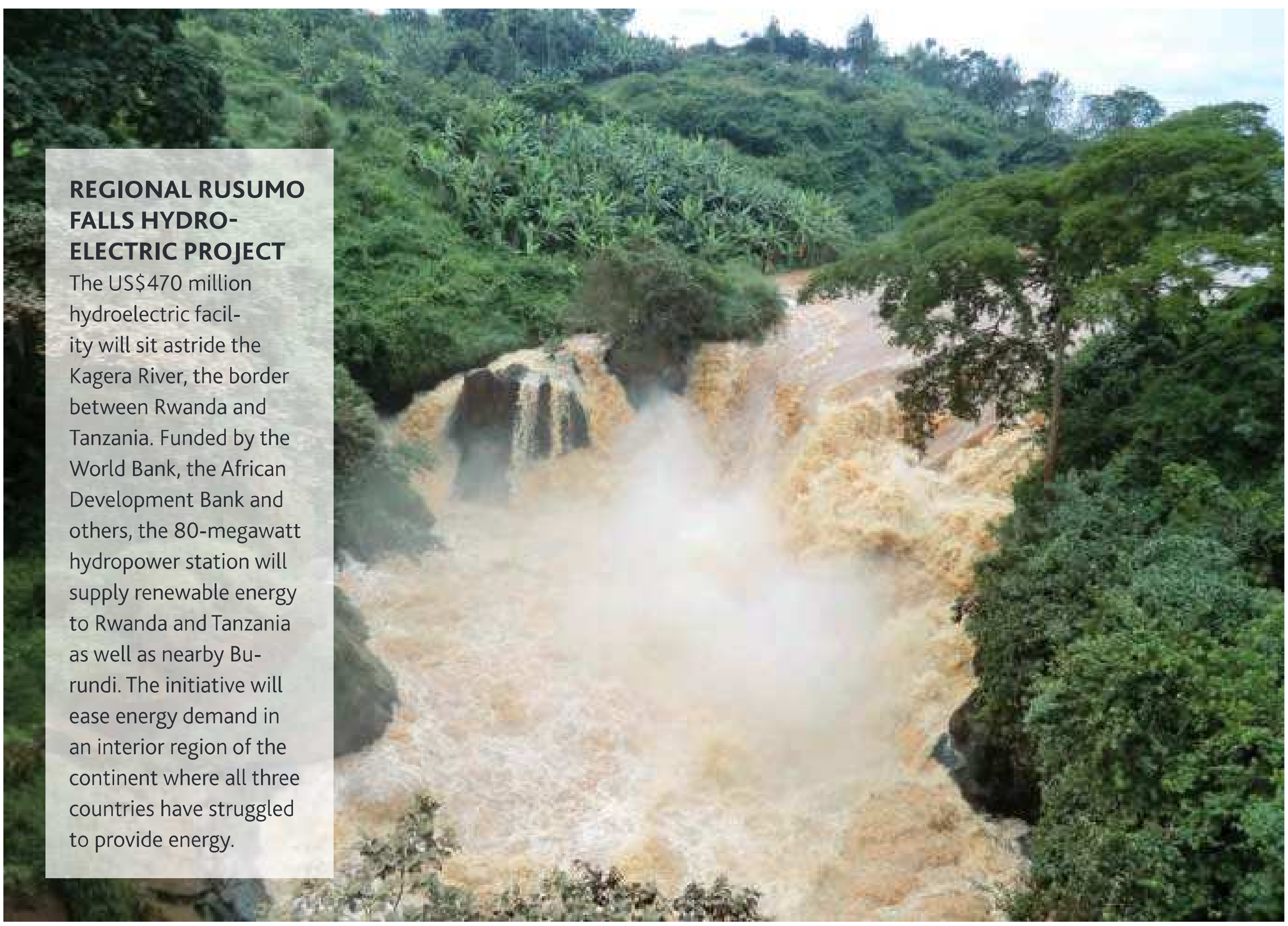
—Atu Mwakyembe, PMP, program manager, U.K. Department for International Development, Dar es Salaam

PROJECT POWER Five

PHOTO COURTESY OF EDENVILLE ENERGY PLC

RUKWA COAL PROJECT

The vast Rukwa coal project in southwestern Tanzania is conveniently situated near the cities of Mbeya and Sumbawanga near the Zambian border. A small power station independent of the national grid had been considered for the Rukwa site when the Tanzanian government announced its plan to build a major power transmission line between the two cities as part of its western build-out of the Tanzanian energy grid. Now the smaller power station has been scrapped for a much larger 100-megawatt facility that will convert coal into energy on the spot, feeding energy directly into the national grid.



REGIONAL RUSUMO FALLS HYDRO-ELECTRIC PROJECT

The US$470 million hydroelectric facility will sit astride the Kagera River, the border between Rwanda and Tanzania. Funded by the World Bank, the African Development Bank and others, the 80-megawatt hydropower station will supply renewable energy to Rwanda and Tanzania as well as nearby Burundi. The initiative will ease energy demand in an interior region of the continent where all three countries have struggled to provide energy.

notable initiatives across the country

PHOTO COURTESY OF BRIDGIT WATER FOUNDATION

NGORONGORO ESEERE AND MERELANI TANZANITE WATER PROJECTS

Earlier this year, in areas outside of Arusha in northern Tanzania, dual water projects were initiated to provide enhanced clean water access to thousands of Maasai tribespeople. Thanks to the efforts of volunteers, a solar pump project in the Ngorongoro Conservation Area will provide water to more than 500 schoolchildren, while improvements to an existing well installation in the Merelani hills will help optimize water collection from gravity-fed water sources there, allowing water to reach more communities.

BAGAMOYO PORT PROJECT

Seeking to relieve Dar es Salaam's overcrowded port facility, China Merchants Group and the Tanzanian government have partnered to build East Africa's largest seaport facility in nearby Bagamoyo. Just 75 kilometers (47 miles) northwest of Dar es Salaam, the massive US$10 billion facility will serve the newest and deepest-drafting container ships while handling 25 times more traffic than the existing facility at Dar es Salaam. Slated to begin this year, construction should take seven to 10 years.

Dar es Salaam's overcrowded port facility

LIGANGA AND MCHUCHUMA PROJECTS

The Liganga and Mchuchuma projects in southwestern Tanzania near the Malawi border are two of the more promising mineral discoveries in Tanzania in recent years. Potentially holding hundreds of millions of metric tons of iron ore and coal, respectively, each mine is expected to continue producing for the next 100 years, generating roughly US$33 million for the Tanzanian government annually. Also, a 600-megawatt coal energy station will provide much-needed electricity to the region.