



DAVIS & SHIRTLIFF

ADAPTING TO THE NEW WORLD

SUSTAINABLE
BUSINESS MAGAZINE

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132KWP SOLAR GRID-TIE INSTALLATION IN BUSIA, WESTERN KENYA



ADAPTING TO THE NEW WORLD

Sustainable Business Magazine speaks to David Gatende, Group CEO at Davis & Shirliff, about new projects, technological evolutions, and the future of solar during a global pandemic.



By Alice Rycroft

The Davis & Shirliff Group is an East African supplier of water-and energy-related equipment. Headquartered in Nairobi, Kenya, and with subsidiaries in Uganda, Tanzania, Zambia, Rwanda, South Sudan, the Democratic Republic of the Congo, and Zimbabwe, as well as a partnership in Ethiopia, Davis & Shirliff provides customers with a wide variety of products from leading international brands, as well as their own

Dayliff brand. Focussed on seven business segments – water pumps, boreholes, swimming pools, water treatment, generators, solar equipment and irrigation – Davis & Shirliff supply technologies which efficiently provide water and energy to communities across the East African region, driving local prosperity and economic growth.

In 2018, when Sustainable Business Magazine last spoke to Davis & Shirliff, the

company was in the process of opening new branches throughout the region, as demand for water-related products grew rapidly in Kenya, as well as in Tanzania, Rwanda, the Democratic Republic of the Congo, and Zimbabwe. (See Sustainable Business Magazine EMEA edition 03/18 for the full feature.) To accommodate this new demand, Davis & Shirliff has just completed construction of a new 10,000m² distribution warehouse in

Tatu Industrial Park, which is expected to allow the company to expand their distribution network in other Eastern and Central African countries. "We have just taken possession of the distribution center, which will include offices and warehousing, and are in the process of transferring stock," says David Gatende, Group CEO at Davis & Shirliff.

"When we last spoke, we had just registered our presence in Zimbabwe," says Mr. Gatende. "We are now open there. We have continued opening branches in the nine countries where we are already present the most recent being new branches in Wajir, Kenya, which is in the former North Eastern Frontier District; Isiolo, which is just above the equator; Kericho, where we have the tea growing district; and also a virtual presence in Hola near the Coast. We now have a total of 71 branches, 41 in Kenya and 30 in the other countries, so our growth has continued."

BETTER COMMUNICATION

Davis & Shirliff have embraced advances in digital technology to make it easier to do business across a wide geographical area. "We recently installed a brand-new PABX telephony system in Kenya and have a rollout plan to continue this across the remaining countries, which means I will be able to call any of our nearly 900 staff from an extension. This is a big deal in our part of the world," says Mr. Gatende. "We have also upgraded our digital apps. We have a solar calculating app called, SolarCalc, which is used by our consulting, technical, and maintenance engineers to specify solar powered solutions as it will tell you how many modules you need, or if a customer wants to use off-grid solar for their house or factory, the app will tell them how much power they're drawing. In June, we launched a new Borehole Manual and a Pump Catalogue, which have all sorts of new and exciting products; and we've made these available on the apps as well. We have continued to climb up the Alexa World Website Ranking, so we're in the top



SOLAR POWERED WATER TREATMENT PLANT (30M3/HR RO) AT NGARAMTONI, TANZANIA



11.5KWP SOLAR PUMPING SYSTEM AT CHARAGITA, NAKURU, KENYA

230,000, which we're very pleased about. We're also now being re-certified by SGS under the ISO 9001:2015 Quality Management Standard."

Davis & Shirliff have held an annual management conference for over 20 years, which brings together managers from across the business to review the year and strategize for the future. "Our theme in 2018 was 'Succeeding in the Digital Age', " says Mr. Gatende. "Last year the theme was 'Putting Customers First'. As you may well imagine, our focus for 2020-2021 is

'Adapting to the New World'. "This year's conference will for the first time be held online using Microsoft Teams, with about 200 managers participating, and as the theme suggests, we shall be looking to see how to not only survive the COVID-19 pandemic but to thrive," says Mr. Gatende.

SOLAR EXPANSION

One notable development is the significant growth in the solar side of Davis & Shirliff's business. "In June, we commissioned our largest grid-tie solar system, a 132kW installation which is being used to power a water pumping station and treatment facility in Western Kenya," says Mr. Gatende. "These grid-tie systems are very popular, and we have several of them deployed because they are so affordable, and they substantially reduce the running cost. In fact, of the seven segments we're involved in, solar is now 20% of our business, and continues to grow at a faster rate than the other segments. Part of this growth is due to regional governments and NGOs taking a bigger interest in sus- ▶



8.5KWP SOLARISED KIBIRICHIA HIGH SCHOOL BOREHOLE IN MERU, KENYA



TATU DISTRIBUTION WAREHOUSE

“TO IMPROVE PEOPLE’S LIVES BY PROVIDING WATER & ENERGY SOLUTIONS ACROSS AFRICA. WHAT I LOVE ABOUT THIS IS THAT IT’S NOT JUST ABOUT THE WEALTHY; IT’S ABOUT EVERYBODY FROM THE BOTTOM OF THE PYRAMID TO THE TOP.”

tainable technology, so they’re keen to fund such projects. It’s particularly gratifying to see solar energy being deployed in our region as we straddle the equator and are therefore abundantly blessed with ‘free’ solar power. For example, we completed a very big project in Meru, near Mount Kenya. The county government there, commissioned us to drill and equip one hundred boreholes, and they wanted all of them to be solar powered, each with a 10,000-litre tank on a tower, and each in a fenced off area with a water kiosk to serve the local residents. This has become a flagship project where people from around the region can come and see, for themselves, the impact on the people of Meru.”

Davis & Shirliff have recently began supplying improved solar inverters, for use with large AC submersible, surface, and swimming pool pump systems. “The inverters, which we’re calling Dayliff Sunverters, now go up to 75kW, which is quite large,” says Mr. Shirliff. “We can also supply up to 250kW Grundfos Renewable Solar Inverters for AC borehole solarization, especially for large community boreholes and water supply, meant to save on costs on running the pumps, by utilizing solar energy during the day, and with hybrid capability to the

grid. With the continued reduction in solar module prices and also advances in solar pumping technology, solar pumping has become the default solution for water supply in rural areas, and Davis & Shirliff is the industry leader, offering a comprehensive range of products for all solar pumping applications. The solar pumping solutions are also offered with remote monitoring solutions, offering 24/7 recording of pump parameters, real-time and historical, and enables alerts via email and SMS in the event of a system problem – before they threaten production. If you can’t measure it you can’t manage it.” And what’s more, the worldwide price per kilowatt keeps falling making solar powered solutions even more affordable. This virtuous cycle combined

with advances in digital technology to switch them on and off have made the viability of solar solutions one of the world’s best kept secrets that we’re trying to let our customers in on! We use the premium SMA inverters from Germany and Victron from the Netherlands and we also import others from Taiwan and China that give excellent value for money. The controls are very, very good now, and we have effective remote monitoring of a much higher capability than what was available a few years ago.”

COMMUNITY PROJECTS

Davis & Shirliff continue to drive down costs in order to benefit customers and the latest innovation is an affordable solar powered water pump ideal for communities. “For about USD500 we can now offer a Dayliff Sunflo kit that incorporates a submersible pump capable of delivering 1,000 litres per day using a single two hundred Watt module drawing water from about 30 metres below ground. For a little extra a plastic water tank and tower can also be supplied for a comprehensive solution,” says Mr. Gatende. “We look forward to a day when these pumps will



66KWP SOLAR POWERED RO WATER TREATMENT PLANT IN LAMU, KENYA



66KWP SOLAR POWERED RO WATER TREATMENT PLANT IN LAMU, KENYA

Standard Tanks Available:

Steel Tanks:

Diaphragm type – 2 litres to 450 litres:

- All available in 10 bar

Limited sizes to handle larger pressure ratings:

- 2 to 100 litres in 16 bar
- 8, 24 and 100 in 25 bar

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- 80 to 10,000 litres in 16 bar
- 12 to 10,000 litres in 25 bar

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- Diaphragm tank - 60 to 450 litres, all standard in 8,6 bar



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replace all handpumps across Africa as hand pumps are now very old fashioned, labour-intensive and inherently unreliable. It's a great solution and a very exciting technological development."

"Solar is not just being used for pumping; it's also being used for water treatment," says Mr. Gatende. "We recently completed an interesting project for communities around Mount Kilimanjaro, in Tanzania near Arusha,

with a local NGO. They've used solar modules to power two reverse osmosis water treatment plants and are distributing the potable water to the Ngaramtoni and Hazina villages."

IMPROVING LIVES

"Our Chairman, Alec Davis, has set us four immediate to medium term goals," says Mr. Gatende. "The first is solar where there are so many opportunities. Our solar

business segment will soon overtake water pumps within Davis & Shirliff, which have been our bread and butter for very many years. Second, the Tatu warehouse has been a multimillion USD project for us and will enable us to achieve expansion into the rest of Africa which has been our ambition. The third goal is that we're updating our Enterprise Resource Planning software and moving our servers and databases to the Cloud. The final goal is about centralizing group operations so that the branches and subsidiaries can fully benefit from all the processes and procedures that the headquarters group support function have developed. When these goals have been implemented, there will be a significant improvement in the efficiency and productivity of the whole organization."

"Our purpose statement states that Davis & Shirliff is about: 'Improving people's lives by providing water and energy solutions across Africa,' says Mr. Gatende. "What I love about this statement is that it succinctly captures what we are passionate about - 'improving lives' - and it is also aspirational as it targets all of Africa. Our key values remain integrity, quality, and 'altiora peto', which is Latin for continuous improvement." □





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