

Case | Public-private partnerships

Grundfos partnership propels water sustainability efforts in Bangladesh



GRUNDFOS 

Possibility in every drop

Leading fast-fashion brands Primark and H&M are driving an innovative project in Bangladesh to introduce water recycling in the textile industry, and Grundfos will supply high-efficiency pumps that will enable simultaneous energy savings.

Italian water treatment specialists Panta Rei, the NGO WaterAid and Fakir Knitwears — whose factory in Dhaka will be the guinea pig in the pilot project — are the other members of the consortium that came together to transform the textile industry's sustainability profile.

The project officially launched in March 2024 when the UK's Foreign, Commonwealth & Development Office signed over grant funding to finance the water purification technology that will be installed at the Fakir factory.

The money is being provided under the FCDO's Sustainable Manufacturing & Environmental Pollution (SMEP) programme, and the bulk of it will go to Panta Rei.

Grundfos, already well established in Bangladesh, as is Panta Rei, was an obvious choice for the clothing brands as one of the technology partners.

Therese Noorlander, Sustainability Director, Industry, at Grundfos, says helping Fakir achieve significant water and energy savings “could be an accelerator towards other companies to also do better, save water, be more efficient and clean their water; which is just generally good for the environment and the people in Bangladesh”. Because textiles is such a big industry, in Bangladesh and many other countries, “if you get something that really works from a commercial perspective for these companies, and at the same time does well for the environment and the communities, then that is a great example that inspires others and lets

communities, legislators and other stakeholders see it is possible and it's doable”.

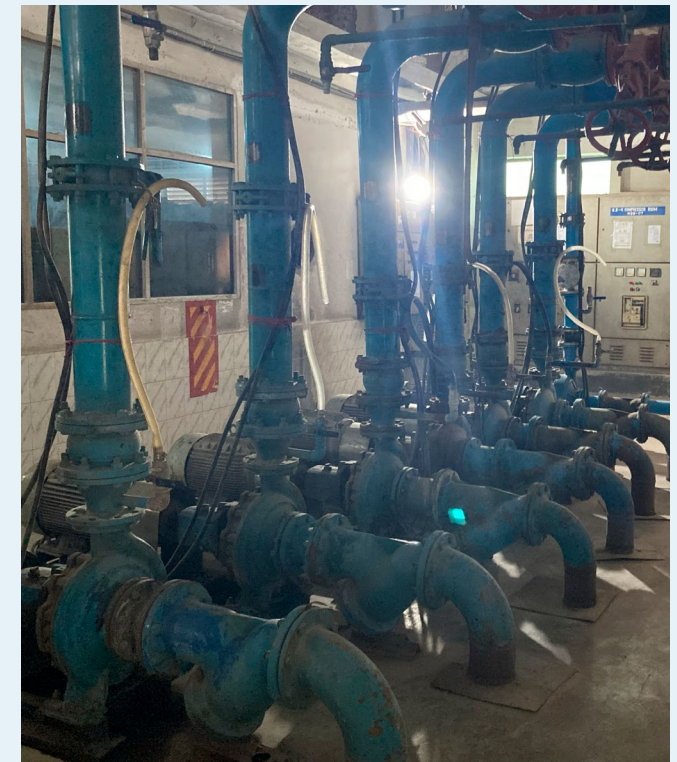
Noorlander says pressure from governments and consumers for fast fashion to clean up its act was a prime motivator for the Fakir project. “Fast fashion has a lot of sustainability issues,” she notes; not just environmental but also in terms of human rights. “From an environmental perspective the use of water is definitely an issue that has been recognised by the general public and therefore also increasingly by legislators, investors, and well-known brands. Brands know this is something they need to look into and if they don't do it now they run the risk of being put out of business,” says Noorlander. Primark and H&M are “very clear on the urgency, why we should do something and what's our responsibility”. “The Bangladesh government and regional authorities are very clear that this is an issue. They know the discharge of water from those textile factories is a risk to the communities, so they're also pushing companies and factories to take action.”

Bhupendra Poudel, Lead Application Manager, Water Treatment, at Grundfos, says the company's long experience in sustainability projects in water and energy made it a perfect fit with the other partners.

Fakir's factory in Dhaka has a production area of 92,000m² and the company employs 10,500 people. Its products are sold in the US, Europe and East Asia, and it boasts annual turnover of \$123-million. Poudel says the project at Fakir will look at optimising production within the factory as well as installing equipment to recycle water from the wastewater plant. “We're going to do an audit on the factory, to see how much energy is being used, especially on the pump side, and then also look at the efficiency on the water treatment side.” WaterAid will help with the audit. “They will approach it at the enterprise level.”

Grundfos' involvement in the recycling aspect will focus on helping Panta Rei design and select the best pumps for the job, “so we can make the system more robust and more energy efficient”. “When we do the audit in the factory, energy optimising might result in replacing some of the old pumps which are not running efficiently.” Up to seven pumps might need to be replaced, Poudel says. “And there will be other pumps in the water recycling plant.” For Grundfos, he says, the project has two main dimensions, sustainability and economics.

Poudel predicts the work inside the factory of replacing pumps and increasing efficiency will be complete by the end of 2024, but the recycling system will take longer because it will require



“This is a prime example of how manufacturing industries can achieve their sustainability goals through a combined approach to water and energy optimisation. Grundfos contributes to energy efficiency by upgrading to energy-efficient pumping solutions within the factory, while also enabling a reduction in water footprint through innovative water recycling solutions.”

Bhupendra Poudel, Lead Application Manager,
Water Treatment, Grundfos

site construction. “It will be kind of a lighthouse project for us, for the textile industry, and we hope we can expand the consortium to other regions, to other customers, and see if we can scale this up to other areas. Especially Turkey, which is a big hub for textiles, and India.

“One of the big questions is whether we can make it more financially viable without any funding. Business case is always related to energy price and water price, which are totally different in other countries. “We have the technology, we have a consortium, we have willingness from the customer, so that should help us get more scaling. Hopefully we’ll make the good project out of it.”



Panta Rei is already a customer for Grundfos pumps, and also well established in Bangladesh. “We’re very excited to be involved,” says Manuel Romero, Technical Sales Director at the Italian company. “We’re always open for collaboration, we’re all in this together, so the more we share, the better it is for the greater good.”

The textile industry is the cornerstone of the Bangladesh economy: according to the Bangladesh Garment Manufacturers & Exporters Association¹, exports of ready-made garments accounted for 84.6% of the country’s exports in 2022/23.

“There are millions of employees who depend on this industry, so that’s why everyone wants to make sure it is sustainable, not only for the industry itself but for Bangladeshi society,” says Romero. “It’s one of the main employers, one of the main generators of GDP. So we want to see how we can make this as sustainable as possible.”

Panta Rei will install technology such as ultrafiltration and

reverse osmosis equipment to clean a portion of Fakir’s wastewater to a standard acceptable for recycling. “The idea is to recycle the water in a sustainable way, without generating the kind of byproducts that would post non-compliance with the wastewater from the discharge,” says Romero. “We don’t want to go with let’s say 90% water recycling, because then you would need to evaporate it, and then if you add an evaporator it means you are adding a lot of energy consumption. But the idea is to look at this project from a holistic point of view. “If you use too much energy to treat the water, that means you will eventually generate a lot of greenhouse gases, and if you use a lot of chemicals, maybe you will generate some sludge,” says Romero.

“So this is why we look at this from a holistic point of view: the impact into the wastewater, the impact into the environment, the atmosphere and the soil, the ground. Also, the implications from the social responsibility point of view.” As Noorlander points out, the EU is increasingly tightening legislation aimed at pushing brands and their supply chains to reduce their climate footprint.

“These brands need to adhere to certain EU standards and transparency, so it’s also what they disclose about what they do,” she says. “Very heavy legislation is about to be implemented, where these brands, the H&Ms, the Primarks, need to report what they’re doing, and they cannot hide. So that’s also a helpful way to increase the level of urgency and readiness for action.

“It also enables something I strongly believe in, which is private-public partnerships, so it drives the positive pressures on bringing parties together, enabling them to work together with the help of essentially the [UK] government freeing up money.”

¹ https://www.bgmea.com.bd/page/Export_Performance

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