

INVESTMENT AND TECHNOLOGY

GrahamTek backers hope to make the case for 16in desal

Private equity investors in South Africa have made a major bet on turning a local engineer into a major global desalination supplier. Success will hinge on persuading the world that 16-inch membrane desalination is a viable concept.

South African desalination engineer GrahamTek is aiming to make a splash in the systems supply market in its first full year after securing major private equity backing by banking on the introduction of 16-inch membrane desalting technology into Saudi Arabia, the world's largest market for desal.

At the start of November, JSE-listed investment conglomerate PSG Group negotiated a deal to take a 50% equity share in GrahamTek through its Energy Partners subsidiary. At the same time, the company unveiled a new modular seawater desalination product based on 16-inch technology that it hopes can be used to crack markets like Saudi Arabia.

While the new investment will give the company the ability to deploy capital into appropriate projects, it is looking to find contracting and construction partners to help it break into the Kingdom's highly competitive water market.

While neither PSG nor GrahamTek would confirm a value for the equity stake, the full investment commitment – covering equity, working capital, and mezzanine finance – is understood to be worth something in the region of \$250 million.

The PSG investment follows the consolidation of a number of business groups owned by the Graham family trust into the newly formed GrahamTek Holdings through a management buy-in completed earlier this year, GrahamTek CEO Julius Steyn told GWI. The family trust retains a minority stake in the company.

"GrahamTek has traditionally been a family business that closely guarded its trade secrets in terms of how to apply the 16-inch technology in the market," Steyn said. "It tightly guarded that knowledge, which is good and bad – good for the family, because it gave them a niche in the market, but also bad because it meant the benefits of 16-inch could not proliferate."

GrahamTek was founded in the 1990s by William Graham to deploy 16-inch RO desalination elements, and was an early pioneer of the technology. It historically oper-

ated on an equipment supply/installation basis, and contributed to some of the technology's biggest successes, including the 2008 Global Water Award-winning Power Seraya desalination plant in Singapore and a pilot at Soreq in Israel that paved the way for the world's largest 16-inch reference.

However, the references and technology became subject to a legal dispute following a falling-out between GrahamTek and Singapore-based technology licensee NuWater, which in 2010 acquired the exclusive rights to develop three 16-inch technology patents first established by GrahamTek founder William Graham. The patents related to technology which handles the increased

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Julius Steyn, CEO, GrahamTek

flow rates that come with larger-diameter membrane desalination elements.

Steyn said that while GrahamTek itself no longer holds the rights to the original patents, the amount of unpublished knowledge and insight still attached to the family is solid, and sufficient to convince two rounds of equity investors of the value of the company. It is now in the stages of establishing new patents for its trademarked SuperFlux 16-inch RO offering.

With new backers in place, the company is now pursuing a strategy of using its capital to establish a presence in new markets by opening local offices and funding pilot plants using its proprietary technology. New offices have been opened in the UK, India, and Saudi Arabia, where the company has started work on a self-funded pilot plant it hopes will demonstrate the benefits of its 16-inch membrane technology.

"GrahamTek has not traditionally been involved in BOT; it has historically been design-build-sell," Steyn added. "Since the restructuring, we've started focusing on BOT and BOO models, and since our entire

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business model is based on strategic partnerships, we are looking to partner with companies that have the operating experience for BOT.

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"This will provide a carrot to say 'look, this is the technology, let us do a pilot that we will finance at no risk to you, and that will demonstrate the capability in your waters and your conditions.' It's a market penetration strategy, basically."

GrahamTek's attempts to push into Saudi Arabia come at a time when the

Kingdom's huge market for desalination is being complicated by the decision to rely on private finance to fund new capacity.

GrahamTek was part of a consultancy project led by DuPont that worked with the Kingdom's Saline Water Conversion Corporation (SWCC) this year to assess the efficiency of the country's large and diverse desalination plant portfolio, with an eye toward the upcoming sale of assets.

"My hope and goal is that GrahamTek will play a significant role in terms of the changes happening in Saudi Arabia," Steyn said. "It's on my wishlist that we can significantly convince the likes of SWCC that 16-inch technology is a very good option to consider, and that we will eventually have a significant share of technologies being applied in Saudi Arabia.

"My view, based on speaking to many clients in the Middle East, is that they need the solution yesterday – they can't wait two years for something to be implemented. So modular solutions that are plug-and-play on a macro scale will help the time to market significantly." ■