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THE WATER INVESTMENT GAP:

HOW BUSINESS CAN PROFITABLY SUPPORT THE PUBLIC AND NON-PROFIT SECTORS IN MITIGATING A GROWING CRISIS

By Alexander Greenberg, Helen Mou, and Aleksandar D. Jovovic

Despite a growing sense of crisis, water remains a precious commodity few talk about. But this silence is not indicative of a lack of business opportunity—quite the contrary. Technology, engineering, and utility firms worldwide are getting their feet wet literally, working in close coordination with governments and development organizations to provide clean and safe access to water to individuals, agriculture, and industrial users alike, delivered as part of market-based, profit-creating solutions. These developments owe much to a realization by governments and international donors that old models of water investment and sustainment have failed to keep up with ever rising demand. Despite this change in thinking and regulation, private sector firms, often gun-shy about working in the developing world, face a series of financial, timing, and planning challenges that must be appreciated and surmounted to ensure the success of a major water-related project. But with traditional opportunities in the developed world stalled by a lackluster global economy, firms may be increasingly predisposed to engagement in this emerging water business.

While a degree of business uncertainly remains, there is no question about pent-up demand: by 2030, global water demand is expected to grow to 6,900 billion cubic meters, which is 40% above the current accessible, reliable supply. An estimated one-third of the global population, concentrated in developing countries, will live in basins where the demand-supply deficit is larger than 50%, according to the 2030 Water Resources Group. Deutsche Bank estimates that an annual global investment of approximately $600 billion is needed to meet the needs of the water market. However, tight public budgets combined with the low or absent price for water continue to drive this investment gap wider. The impending shortages will impact individuals, communities, agriculture, industry and governments alike.

In response, the most agile private sector firms have begun to apply commercial practices to fund water investment through innovative partnerships. Infrastructure firms can leverage technical knowledge, managerial strength, and access to private capital in order to drive growth, though they must come to the table armed with a deep understanding of the interplay between water demand, policy drivers, and economic resources available to fund projects. This helps them more effectively partner with the non-profit and public sectors, who can implement projects to strengthen urban and agricultural water practices and empower host government capacity in program funding & finance, project management, and acquisition skills. When these conditions are met, private sector business has the strongest working foundation for pursuing water-related business opportunities.

AN INVESTMENT SOLUTION: LOCAL & FOREIGN BUSINESSES RESPOND

Despite fast-growing global water needs and the inability of current infrastructure systems to serve them, host governments, especially in developing countries, are often unable to organize and finance water infrastructure development. Politically and fiscally constrained, governments cannot meet the prohibitive start-up costs of building and operating irrigation and water delivery networks. Economic, social, and political instability as well as the threat of drought in countries with arid climates generate risks too high for governments to bear singlehandedly.

In the last two decades, Public-Private Partnerships (PPP) have emerged as mechanisms to share the risks, funding and operations costs of water infrastructure projects with the private sector. In water projects, PPPs vary in scope from short-term operation and maintenance agreements to 30-year concessions where a private company designs, builds, and operates the utility. In developing countries, wider-scope projects are beginning to gain favor with host governments as the PPP model is increasingly refined.

In Morocco in 2004, a unique PPP for an irrigation system was instituted after a depleted aquifer and skyrocketing pumping costs plagued farmers in the Guerdane perimeter, a region responsible for 50% of Morocco's profitable citrus farming industry. The Moroccan government sought a private partner to finance and build an irrigation system, and competitively awarded a 30-year concession to a Moroccan industrial conglomerate Omnium Nord-Africain. In this arrangement, the government provided 47% of the financing with public funding, Omnium provided 43% with private investment, and the remaining 10% was supplied by the end-users in the form of a connectivity fee that paid for installation costs at each farm. Omnium would build and operate the irrigation system for the duration of the contract, and earn revenue by collecting tariffs from the end-users. The PPP also contained contractual safeguards to mitigate the risks facing Omnium; the government agreed to reimburse the firm if a drought caused a 15% or greater revenue loss.

Governments often opt for firms with a local presence to administer water infrastructure projects, and multinational water firms have adapted to this requirement by entering the localized and fragmented water PPP market through partnerships. In 2011, Veolia, a leading French-based environmental solutions company, won a 25-year contract to overhaul and expand water infrastructure in Nagpur, India's tenth largest city. Veolia India, in a joint venture with Nagpur-based engineering firm Vishvaraj Environment, is responsible for all facets of managing the city's water supply, from treatment plants to delivery to Nagpur's 2.7 million inhabitants, in addition to billing and collection of tariffs. This contract is considered the first Indian public private partnership to operate at the scale of an entire city on a continuous basis. To carry out this project Veolia and Vishvaraj established a special purpose entity, Orange City Water, to operate the water system.

In PPPs, such special purpose entities enable a project's shareholders, typically the financiers, integrators, operators, and advisors, to legally "ring-fence" the project's assets and risks. This practice centralizes both project management in a local context and allows contractors to isolate and concentrate liability. In this example, the city-owned water utility, Nagpur Municipal Corporation (NMC) retains ownership and decision-making capacity over the water system, while Orange City Water is responsible for its upgrades and operations over the life of the contract. Orange City will spend five years upgrading the city's water pipeline network and home connections at an investment cost of €60 million. 70% of this cost will be funded by the Indian government while 30% will come from the operator's private funds. After paying its partners and subcontractors, Veolia is expected to earn close to €400 million over the life of the contract.

BEST PRACTICES AND LESSONS LEARNED

The Nagpur example showcases opportunity for multinational water companies to win PPPs in developing countries. Nevertheless, local operators are also gradually achieving the requisite technological capacity and scale to challenge larger competitors. A recent study by the Public-Private Infrastructure Advisory Facility (PPIAF),

a multilateral technical assistance organization, explored this changing dynamic and found that in 2000, five multinational water companies composed 80% of the market for water PPPs in low or middle-income countries, as classified by the World Bank. By 2009, this share had shrunk to 60%, with 28 local firms serving at least 400,000 people. Facing this competitive pressure as well as the challenges of managing a resource-intensive project in another country, multinational firms must forge partnerships with local entities. Local partnership is also essential to gaining visibility and developing a presence in countries with opaque business and political processes.

No single defined template for designing PPP arrangements exists due to the unique constraints, risks, and regulatory environments surrounding water infrastructure. PPP models tend to vary across regions due to variance in economics, climate, culture, and precedents. Results may vary over time, and development stakeholders are beginning to identify best practices for PPPs. Private firms have developed sophisticated mechanisms for financing their share of PPPs, such as leveraging or establishing their own capital arm to take on debt instead of borrowing from the open market. Still, some schemes have failed because private operators were forced to shoulder too much of the capital investment; for large projects, government subsidy is essential. Public sector support must often continue in the implementation phase, through purchase agreements that assure a degree of predictable demand for the PPP. The Guerdane and Nagpur examples demonstrate hybrid funding models for water systems that both mitigate risk for the private operators and reduce the cost burden for the government. Contractual challenges, political considerations, exchange rate fluctuations, and other typical international business challenges are also to be expected. Host governments would benefit from gaining greater sophistication in designing optimal legal agreements, financing, and pay-back mechanisms to support water infrastructure development in their countries. Sharing the insights and experiences of the private sector with public counterparts will facilitate the successful expansion of PPPs and ensure efficient allocation of project risk.

OPPORTUNITIES AMID A GROWING CRISIS

Despite bleak statistics, innovative policy and business solutions are more readily apparent, signaling to governments to right-size policy, to development organizations to support change, and to business to seek solid, long-term investment opportunities.

Indeed, the water resource challenge in the developing world is a harbinger of problems in developed countries rather than an isolated problem only poor countries face. Disputes over scarce water resources and shale gas extraction in the US or water supply for hydroelectric power versus agricultural use in China all fall squarely into this arena.

The business community may require the most assurances and support. Sometimes unaccustomed to working in uncertain business environments, concerned about the political and social stability of developing countries, and unwilling to embark on less-than-well-trodden paths, engineering, infrastructure and utility firms as well as their financial backers will require solid operational guidance and advice. Yet at a time when infrastructure spending is ebbing in the developed world, and traditional opportunities among the BRICs have stalled, firms may have an increasing interest in embarking on a thoughtful and guarded review of opportunities in the PPP water sector. As they mull these options, they will need to develop clear answers to the following questions:

- Do shareholders and other stakeholders have an appetite for long-term investments?
- What are the true financial, legal and political risks of establishing PPPs in developing countries?
- How can the firm's offering better mitigate these and other challenges?
- Successful firms have found ways to leverage in-house financing; is this an option for the opportunity at hand?
- What is the minimum government and non-profit involvement required to move forward?
- Who are the ideal partners and how best to evaluate them?
- Can the business case and technical offerings developed now be applied to future opportunities?

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