

Funding models for financing water infrastructure in South Africa: Framework and critical analysis of alternatives

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ABSTRACT

The Government of South Africa has been the main provider of public infrastructure, particularly in the water sector. Government administration and institutional structures continue to shape and influence infrastructure investment. The South African constitutional system imposes unique complexities and constraints on infrastructure investment. The country experiences a serious backlog in water infrastructure investment for the development and management of water resources and water services. In 2011, this under-investment was estimated at more than R600 billion (600 x 10⁹ ZAR: South African Rand). The national Government traditionally had a pivotal role in shaping water infrastructure investment. Government needs to find a solution to this backlog by putting in place new institutional structures and funding models for effective strategies leading to prompt water infrastructure provision. The research identified several funding models for financing water infrastructure development projects. The existing public provision model continues to characterise much of the publicly-provided water infrastructure in South Africa. These models see Government planning, installing and financing infrastructure with pricing at marginal costs or on a loss-making basis, with returns recovered through the taxation system. Nowadays, water infrastructure provision is split between fully-public and mixed ownership by water entities. Public-private partnerships (PPPs) in the water sector are not yet a reality.

Keywords: Department of Water Affairs, funding models, water infrastructure, National Treasury, operations and maintenance

INTRODUCTION

Many developing countries need water infrastructure to improve the livelihoods of their citizens and their quality of life, and South Africa is no exception. While there are many constraints to the delivery of water infrastructure, one of the most obvious factors that hampers delivery is project costs. Access to finance is the lifeblood of water infrastructure delivery, as is the packaging of the funding model for each project or groups of projects. Unfortunately, the cost of water infrastructure delivery continues to escalate to the point where many developing countries simply cannot afford such infrastructure.

The World Bank (2010) indicates that infrastructure in Africa lags behind other developing countries. Not only are infrastructure networks in Africa deficient in coverage but the price for the services provided is exceptionally high by global standards. Conservatively, sub-Saharan Africa has a combined infrastructure deficit for water and sanitation of an estimated \$93 billion (bn.) annually (World Bank, 2010). Thus, meeting Africa's infrastructure needs calls for a substantial programme of infrastructure investment and maintenance. Some two-thirds of this estimate relate to capital expenditure, with the remaining third linked to operation and maintenance requirements (Brinco-Garmendia et al., 2008; World Bank, 2010).

The backlog of water infrastructure provision and poor access to service delivery for poor communities have forced a

new approach for governments, industries, financiers and other role players. Delays escalate the eventual cost of infrastructure even more. Countries like South Africa have no choice but to look at innovative approaches to ensure that they eliminate their water infrastructure backlogs. Efficient and productive infrastructure services are important inputs for all industries and hence vital for economic growth and efficiency, productivity and competitiveness. Continued growth in infrastructure productivity will play a crucial role in managing the emerging challenge of South Africa's growing population (DBSA, 2009; DWAF, 2004, 2008).

Problem analysis and rationale

A number of organisations have attempted to delineate the extent of the water infrastructure deficit and requirements in South Africa, with limited success (DWAF, 2004, 2007; DBSA, 2009; CSIR and CIDB, 2007; CSIR, 2010; World Bank, 1994, 2010; DWA, 2011a, b; SAICE, 2011). Their efforts all underscore the pressing need to address the following:

- A detailed inventory of both the extent and condition of public infrastructure tracked on a yearly basis to measure progress towards reducing the infrastructure deficit
- New funding models are needed to supplement existing funding techniques that can no longer fully fund both the rehabilitation of public infrastructure and the expansion required to accommodate growth
- Infrastructure maintenance is often one of the first cuts made in spending when budgets are tight
- Capital investment in infrastructure continues to be viewed as a high priority
- Constrained budgets at all levels of government seem to render even modest programmes and projects unaffordable

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