

MEDIA RELEASE

09 October 2014

Pre-feasibility study shows promising results for Monont'sa Pumped Storage Scheme

A twelve month long pre-feasibility study to investigate the viability of the Monont'sa Pumped Storage Power Plant in Lesotho has concluded that the scheme will provide significant power to South Africa's rapidly developing neighbour when required to do so, said GIBB consultants – a member of the EDF Joint Venture (JV) commissioned by the Lesotho Electricity Company (LEC).

GIBB worked in a JV with EDF (France), URS (UK), and local consultants Knight Piésold and Royal Haskoning DHV to produce the report, together with GWC, a Lesotho consulting engineering firm.

The 1,200 MW pumped-storage project, if executed will meet medium and long term energy requirements of the region. Since power-strapped South Africa has been rationing the power it supplies to Lesotho, the country is seeking ways to generate its own energy through hydro generation.

"Pumped Storage is a proven technology and various projects of this type have been in operation around the world including several in South Africa. Much of the latest developments are centred around the role that pumped storage can have in support of other renewable technologies," said Colin Logan, Technical Executive of Dams, Hydropower and Tunnelling at GIBB and Project Manager of the design and supervisory consulting team on the 1333MW Ingula Pumped Storage project underway in Little Drakensburg.

Logan points out that pumped storage schemes should not be viewed as stand-alone or base load solutions, but provides a very reliable supplement to a mix of existing generation technologies.

"The current trend to thinking that renewables such as wind and solar is the answer for our future energy needs is, in my opinion, misguided. These technologies whilst appearing to offer great benefits have to be viewed in totality and what longer term effects they might have on the environment they were initially thought to protect," he said.

GIBB is the leading South African black-owned consulting engineering firm with a Level 2 Black Economic Empowerment (BEE) rating and a reliable network spanning the African continent. The firm occupies a market share of approximately 4% and delivers world-class solutions across a diverse range of markets. With over 55 years of experience, GIBB is the partner of choice for the private sector, parastatals and governments who seek knowledgeable people, expertise and excellence.

Study conclusions

The main conclusions that have been drawn from the pre-feasibility study are that the project is:

- Technically very feasible with relatively limited risks identified and is the most appealing of the sites considered.
- Economic and financial feasibility – viewed in the context of the SA Power Pool framework for current generation expansion, it appears that the benefits that a large pumped storage project like Monont'sa can offer are too small in the short term to adequately compensate for the cost of such a project. However, bearing in mind that such a scheme takes around 15 years from inception to generation, medium term projections show that by 2035, the southern African region will indeed require additional peaked power capacity.
- Environmental and Social feasibility - the project appears feasible provided that mitigation measures are instituted for the preservation of environmentally sensitive areas (such as the conservation area) and that the correct procedures are following for resettlement of communities as set out by the International Finance Community and the World Bank.
- Comprehensive assessment - the pre-feasibility study, which began in December 2012 included a topographical survey of the entire site; assessment of geological and geotechnical conditions; assessment of dam types and locations; assessment of reservoir capacities based on dam construction and production costs; hydrology and siltation studies; assessment of environmental and social impacts; preliminary design of main components of the scheme; assessments of the technical and economic feasibility of the scheme.

Advantages of pumped storage

Often described as 'peak-logging' or 'peak power' schemes, power is generated during times of peak demand to supplement supply. Off-peak times, at night for example, the turbines are reversed and pump water from the lower reservoir to recharge the upper reservoir in time for the next peak event.

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“Monont’sa is one of several schemes under consideration and it is important that all are judged on the same criteria. We are encouraged by the results of the study and look forward to Monont’sa becoming the first multi-stage pumped storage plant in Lesotho,” concluded Logan.

Ends

Note to Editors:

Leading South African black-owned consulting engineering firm, GIBB, announced its partnership with the largest architectural firm in the country, SVA. The partnership will strengthen the skillset of both companies and grow its confidence in Africa.

With an impressive track record of delivery spanning over 70 years, SVA has successfully delivered over 1000 architectural projects.

In partnership with SVA, GIBB will now be able to offer clients a full range of architectural services including Master Planning, Urban Design and Building Design.

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