Media launch for the Biogas project at Northern Works Waste Water Treatment Plant

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Program Director
Members of the Board
Members of the Executive Committee
Senior Managers
Councillors
Members of the Media
Invited guests
Ladies and gentlemen,

I would like to firstly convey my warm greetings to you and to also thank you for honouring our invitation today. It gives me great pleasure to stand before you today, to launch a ground breaking project by Johannesburg Water.

For the past couple of years the City of Johannesburg has been striving to deliver quality services to the residents of the greater Johannesburg. This means that the municipality is constantly looking for new innovative ways to cater to its residence in the best way possible, as well as to live up to the name of a world class African city. The Biogas to electrical energy on waste water treatment works project is another way we are proving our commitment to service delivery.

When Eskom announced tariff increases that were to take place between the period of 2010 and 2012, we quickly realized that the increases would have a direct effect on operational costs of waste water treatment in Johannesburg.

Furthermore, the tariff increases by Eskom indicated that the annual electrical power costs would treble in the next seven to ten years. It is estimated that by 2020 the cost of electricity for waste water treatment in Johannesburg will increase from R93million per annum as it was in 2010 to about R300 million per annum. This estimated amount excludes the proposed 16% tariff increase per annum by Eskom. The tariff

increases will thus put enormous financial pressure on water service providers. This ladies and gentlemen could have implications on the environment, the provision of health services to the residence of the city of Johannesburg, the downstream cost of potable water production, the economy and also impact on the quality of services that the city delivers to its residence.

As you may know, energy plays an important part in the waste water treatment value chain and thus great effort is being made in creating green energy as well as ensuring the reduction of power consumption.

After the announcement of tariff hikes, Johannesburg Water took the liberty to investigate ways of generating electrical power from the biogas produced at their waste water treatment works as well as to reduce the current electrical power demand.

In 2009 a feasibility study was done to find out more about biogas to electrical energy generation on waste water treatment works. The first part of the study was to try and find out the risks involved in the combined heat and power (CHP) operations on waste water treatment works.

The second part of the study was to determine which of the contaminants would have to be removed from the biogas before it could be used effectively as a fuel in the CHP process. A number of processes that were available for use to scrub the biogas of the contaminants were investigated and the method that was the most efficient, cost effective and sustainable method for the city was identified by Johannesburg Water.

Thirdly, ladies gentlemen, an investigation was done to find a suitable and cost effective prime mover for the production of CHP. To make sure that the investigation was thorough, we visited waste water treatment works in Germany and Austria where they have over 20 years of experience in CHP production on waste water treatment works. The visit was a great help in identifying the most appropriate prime mover as well as in assisting with the general process of putting the project together.

The last part of the investigation was to determine the volume and quality of biogas produced at the Northern Waste Water Treatment Works, which is the biggest waste water treatment plant in Johannesburg.

After all the findings from the investigations were finalized in 2010, a report was drawn up with all the findings and recommendations to which the board gave their approval and the project managers the green light. It was decided that the biogas project be implemented at the Northern Waste Water Treatment works first as a pilot before it is moved to other waste water treatment works.

The aim of all of this ladies and gentlemen is to become as self-sufficient as possible for the electrical power demands of our waste water treatment plants by 2016. Initially combined heat and power (CHP) generated could possibly provide about 55 percent of the waste water treatment electricity needs. And all of the electrical power generated at the waste water treatment plant will be used on the works site. This will result in Johannesburg Water saving on costs that would have inevitably affected the residents of the city.

In conclusion ladies and gentlemen, it was important for Johannesburg Water to embark on this project in order to protect waste water treatment facility operations. Failure to do so could lead to an increase in the demand for health services, environmental pollution and potable water treatment costs. This could affect the amount of residential development near water impoundments as well as decrease the number of recreational activities and cause an economic decline in Johannesburg as a whole.

This project also helps Johannesburg in terms of sustaining the city through using resources that is has available to it in order to protect and enhance the environment.

Once again it gives me great pleasure to announce to you that the biogas project is up and running and that the city of Johannesburg is excited at the realization of this venture.

A big thank you and congratulations goes to Johannesburg Water and the project managers for giving the City of Johannesburg yet another reason to be proud about being a world class African city.

I thank you