The eThekwini Mini-Hydro's Electricity Generation CDM Project, Durban , South Africa

CDM Project Summary - June 2010

In the eThekwini Municipal Area there are some 360 municipal owned reservoirs operated by eThekwini Water Services. In around 12 to 18 locations, pressure reduction valves are used to dissipate the excess static and velocity water pressure (head) generated by gravity in the undulating topography. This excess head represents a significant amount of energy.

Project Location *: eThekwini Municipality, KwaZulu-Natal, South Africa*

Project Objectives

- Contribute towards offsetting of the **carbon footprint** for hosting the **2010 FIFA** World Cup in Durban
- "Carbon" Capacity Building
- **Financial return** through the sale of Carbon Credits and Provision of **renewable energy**
- **Job Creation** and **sustainable development**
- Combating of global **climate change**
- **Technology Transfer**

Project Role-players

Project Developer:

- **eThekwini Environmental Planning and Climate Protection Department**

Project Partner:

- **The eThekwini Municipality eThekwini Water and Sanitation (EWS) Unit**

Average # of CERs per Year : 12 000
Total # of CER's (14 Years) : 168 000
Average kWh Electricity Output Per Year : 11 650 000
Total kWh Electricity Output (14 Years): 163 100 000

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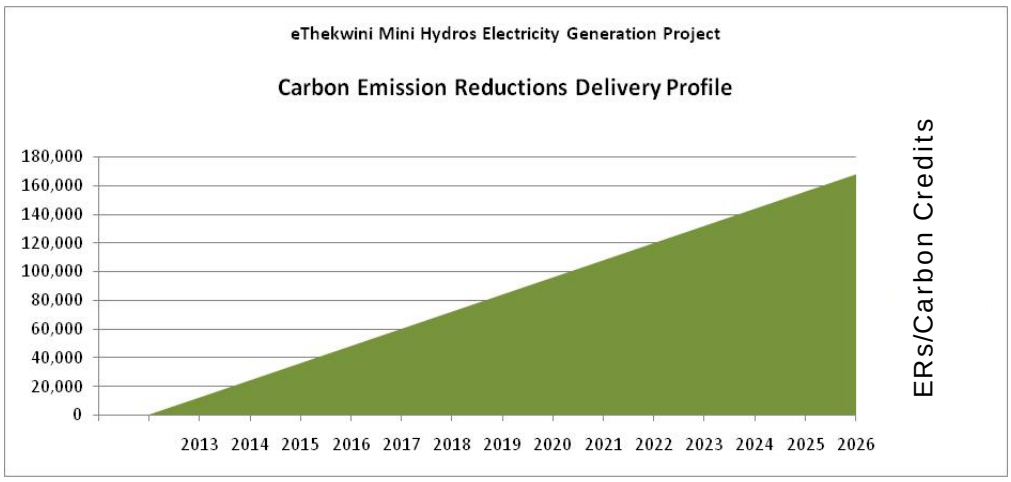
Job Creation

Hydro Electric Power facilities (No.):
Engineering Technician x 1
Plant Operators x 2
General Workers x 2

Additional jobs will also be created for the ongoing environmental monitoring of the project, CDM processes for ongoing registration of the CER's, carbon transaction administrator and project manager / champion



Project Technologies

The proposed mini hydro electric power installation at each reservoir could comprise piping adaptors to install the mini or micro turbine unit at a suitable point. The mini hydro systems may be installed in raw and potable water pipelines with the appropriate systems to ensure water quality is maintained.

**please note that all timeframes / calculations are based on the assumption that plant commissioning will take place in the third quarter of 2012. This date is dependant on a range of factors including capacity within the municipal departments responsible, environmental authorisations, CDM registration and the signing of PPA and ERPA.*