

Workshop on Small Scale Hydroelectric
(SSHE) Installation (May 2011)

REHABILITATION OF EXISTING
HYDRO INSTALLATIONS

May 2011
Pretoria, South Africa

Workshop on Small Scale Hydroelectric
(SSHE) Installation (May 2011)

- There are a few existing idle/defunct SSHE installations scattered around South Africa
- The present overall SSHE refurbishment capacity potential is of about 15 MW if the most prominent installations are add together
- The ownership of idle/defunct installations varies (national/local government, private owners)

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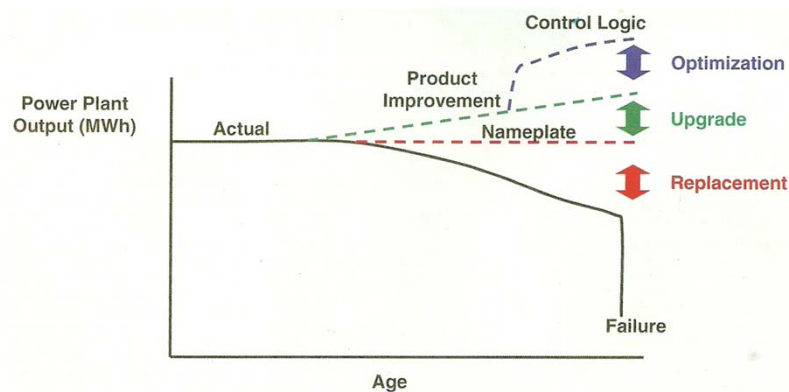
Most prominent SSHE installations worthwhile of rehabilitation/upgrade/replacement

- Orange Fish Tunnel (Shaft 7) 10,0 MW: DWA
- Jozini Dam Hydro 2,7 MW: DWA
- Kouga Dam Hydro 3,8 MW: DWA
- Belvedere Old Hydro 2,0 MW: DEA
- Mkhondo (Piet Retief) 1,0 MW Local Municipality

NB: rehab to hydro plants done in Swaziland

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Life cycle of hydropower plant



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Specific case: Hartbeespoort Dam Hydro

- 1924 micro hydro installation by Gilkes at this dam
- Yester-year installation too small for rehab/upgrade but replacement by much larger installation which is much desired
- Energy needed for the dredging of the dam impoundment (i.e. to increase in capacity)

Hartbeespoort Dam Specific case of hydropower





Gilkes Service & Refurbishment

As long as we have been manufacturing hydro turbines and associated control systems, we have also been delivering an after sales service throughout the world to meet our customers requirements.



Whether it's a stand alone 50kw turbine or a 10 MW grid connection plant, *Gilkes can meet all your mechanical & electrical after sales needs.*



Service & Refurbishment

Site Name: Lujeri



Location: Malawi

Service: Re-governing of 1957 Francis and replacement of original Ali-bronze runner



Old original runner




Replacement runner



Service & Refurbishment

GILKES

Installed and Commissioned
DEC 2010





Service & Refurbishment

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Site Name: Ruo

Location: Malawi

Service: Re-governing of 1934 Turgo and replacement
of original Ali-bronze runner



Old Runner damage

New replacement runner



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Old Runner



Replacement Runner

- Site: Guma Valley, Sierra Leone
- Service: Replacement of runner





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Thank You
Baie dankie

11th MAY 2011

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