

## “Cogen for Africa” Initiative

The AFREPREN/FWD “Cogen for Africa” project is an innovative and first-of-its kind-regional initiative funded by the Global Environment Facility (GEF) designed to support small, medium and large-scale industries in Africa to develop their cogeneration potential. This initiative is supported by the GEF via the United Nations Environment Programme (UNEP) and the African Development Bank (AfDB). The Energy, Environment and Development Network for Africa (AFREPREN/FWD) is the executing agency for the project.

### What is Cogeneration?

Cogeneration is the simultaneous production of energy, heat and power from a single energy system and source. Cogeneration is also known as combined heat and power (CHP) technology. In a cogeneration plant, very high efficiency levels, in the range of 75-90% can be reached. Since cogeneration can meet both power and heat needs, it has other advantages such as significant cost savings for the plant and reduction in emissions of pollutants due to reduced fuel consumption. The potential for cogeneration is attractive in industries with joint requirement of heat and electricity, primarily agro-industries such as sugar, rice mills, wood, coconut, palm oil, pulp & paper industries as well as other industries such as fertilizers, steel, chemical, cement, pulp and paper, and aluminum.

**Cogeneration potential in the sugar industry in selected African countries**

Country	Installed national power generation capacity from all sources, 2004 (MW)*	Cogen potential Using high pressure systems (MW)	Cogen potential as percentage of total installed national power generation – capacity from all sources (%)
Ethiopia	726	30.9	4.3%
Kenya	1143	159.2	13.9%
Malawi	238	56.5	23.7%
Sudan	755	156.9	20.8%
Swaziland	128	185.0	144.5%
Tanzania	881	97.8	11.1%
Uganda	303	46.0	15.2%
<b>Total</b>	<b>4174</b>	<b>732.4</b>	<b>17.5%</b>

Sources: [www.eia.doe.gov/pub/international/iea2004/table64.xls](http://www.eia.doe.gov/pub/international/iea2004/table64.xls); AFREPREN/FWD 2004 (excludes back-up power generation and small privately owned gensets), Deepchand, 2002; Karekezi and Kimani 2002; AFREPREN/FWD 2004; WADE, 2004; Davis and Hough, 2006.

Note: \* excludes back-up power generation and small privately owned gensets

### Cogen for Africa – Replicating Successes

Set to run for 6 years, the project will build on the success of cogeneration in Mauritius, which currently meets close to 40% of its electricity supply from cogeneration. The project aims to significantly scale up the use of efficient cogeneration systems initially in seven Eastern and Southern African countries namely Kenya, Ethiopia, Sudan, Tanzania,

Malawi, Swaziland and Uganda. The project will also take on board relevant elements of the European Commission- supported regional cogeneration programme in Southeast Asia, which has been successful in promoting numerous efficient cogeneration installations.

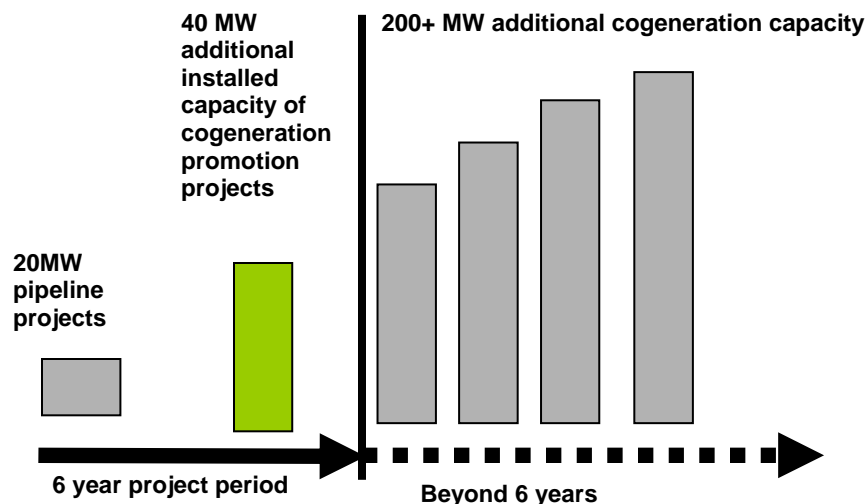
The AFREPREN/FWD “Cogen for Africa” project will work with promising and profitable agro-industries with a solid track record and that have demonstrated commitment to expanding their cogeneration investments in Africa. Notable agro-industries that are expected to actively participate in the project include private-sector owned and profitable sugar companies as well as private sector entities involved in agro-processing industries such as pulp and paper, forest products, palm oil, groundnuts, sisal and rice.

The project’s key activities include:

- Developing and enhancing the capacity of project developers, technical service providers and local manufacturers of modern and efficient cogeneration systems.
- Mobilizing financing for cogeneration projects based on terms and conditions that are favorable for cogeneration investments
- Demonstrating the commercial, technical, economic and environmental benefits of modern and efficient cogeneration systems through the installation of full demonstration cogen plants
- Promoting more favorable policies and institutional arrangements that support cogeneration

### Targets and Milestones

During the initial six years, the AFREPREN/FWD cogen project is expected to lead to the development of 40MW of modern and more efficient cogeneration capacity through the installation of full-scale promotion projects (FSPPs). By the end of the six-years, AFREPREN/FWD “Cogen for Africa” project is expected to have set the stage for accelerated cogeneration investments through the promotional projects. Another 20MW of cogen projects will be directly supported through the provision of advice, services and training. Beyond the initial six-year phase, AFREPREN/FWD “Cogen for Africa” Project is expected to stimulate the installation of an additional 200MW of cogeneration capacity in the medium to long term.



More information on this project is available on the project website:  
<http://cogen.unep.org>