



CEFA and Rural Electrification in Tanzania: 25 years of commitment

CEFA (European Committee for Training and Agriculture) is an Italian NGO that promotes initiatives of development, cooperation and international volunteer service. Founded in 1972, CEFA supports projects promoting integrated self-development in rural regions of the Mediterranean, East Africa and Central/South America. Active in Tanzania since 1976, CEFA promotes interventions in the fields of Rural electrification, Water supply, Agriculture, Agro-processing. In 2007 CEFA started implementing projects in Dar es Salaam addressing urban poverty.

CEFA's commitment to rural electrification in Tanzania lasts since 25 years. In this period the organization has realized three mini hydro-electric power plants, providing electricity to hundreds of people living in the rural areas of the Iringa and Njombe Regions. Careful planning procedures for technical capacity, good institutional arrangements, managerial capacity and economic considerations, as well as multi-stakeholder involvement from the planning phase onwards, have resulted in the sustainable operation of the three hydro power plants. Such commitment in the sector continues still today, with a current upgrade project in Ikondo and the design of a new project in Ninga, allowing more and more families to benefit of the opportunities offered by having electricity in their villages.

Matembwe

Matembwe, in the District of Njombe, is where CEFA realized its first hydro power plant in Tanzania. At present the power plant and the distribution network are owned and managed by the Matembwe Village Company – MVC Ltd, a local entity established by CEFA together with the other partners of the original project (Catholic Dioceses of Njombe, District of Njombe and Village of Matembwe).

Summary details	
Type of facility	Reservoir micro hydro plant
Commissioning year	1984
Funded by	Italian Ministry of Foreign Affairs; Belgian Ministry of Foreign Affairs; European Union; CEFA
Ownership	Matembwe Village Company - MVC Ltd (CEFA, Catholic Dioceses of Njombe, District of Njombe and Village of Matembwe)
Output power	120 kW
Villages served	Matembwe and Image
Distribution network	19 km of MV
Households connected	556
Public institutions and economic activities connected	64
Aqueducts powered	4
Connection with TANESCO	Yes (in 2015).

Bomalang'ombe

Bomalang'ombe, in the District of Kilolo, is where CEFA built its second hydro power plant, on the model already experimented in Matembwe. The project intended to favour the development of the village of Bomanlg'ombe by providing it with electricity. The availability of electric power determined a rapid development of the village of Bomanlg'ombe, that in these years has seen its population grow from 5.000 to more than 12.500 inhabitants. At present the power plant and the distribution network are owned and managed by the Bomalang'ombe Village Company – BVC Ltd, a local entity established by CEFA together with the other partners of the original project (Catholic Dioceses of Iringa, District of Kilolo and Village of Bomalang'ombe).

Summary details	
Type of facility	Reservoir mini hydro plant
Commissioning year	2001
Funded by	Italian Ministry of Foreign Affairs; European Union; CEFA
Ownership	Bomalang'ombe Village Company - BVC Ltd (CEFA, Catholic Dioceses of Iringa, District of Kilolo and Village of Bomalang'ombe)
Output power	250 kW
Villages served	Bomalang'ombe and Lyamko
Distribution network	17.3 km of MV
Households connected	252
Public institutions and economic activities connected	76
Aqueducts powered	3
Connection with TANESCO	No

Ikondo

Ikondo, in the District of Njombe, is where CEFA realized its third hydro power plant. Unlike the previous two sites, Ikondo is a run-of-river plant, which uses the water provided by the river Kyepa. The project intended to help start-off the development of the village of Ikondo, a very isolated settlement in the District of Njombe. At present the power plant and the distribution network are still owned and managed by CEFA.

Summary details	
Type of facility	Run-of-the-river micro hydro plant
Commissioning year	2004
Funded by	Italian Ministry of Foreign Affairs; European Union; CEFA
Ownership	CEFA (to be handover to MVC Ltd)
Output power	83 kW
Villages served	Ikondo
Distribution network	8 km of MV
Households connected	130
Public institutions and economic activities connected	46
Aqueducts powered	1
Connection with TANESCO	Yes (in 2015)

Ikondo II

The current electrification project of CEFA is an upgrade of the previous project in Ikondo. The project, co-funded by European Union under the 10th EDF, started in September 2011 and will permit in 2015 to upgrade the output of the power plant up to 430 kW and to increase the actual distribution grid reaching 4 new villages and connecting to the Matembwe grid and to TANESCO grid in order to sell the excess of production. At the end of the project the power plant and the distribution network will be owned and managed by the Matembwe Village Company – MVC Ltd.

Summary details	
Type of facility	Run-of-the-river micro hydro plant
Commissioning year	2015
Funded by	European Union; CEFA
Ownership	CEFA (to be handover to MVC Ltd)
Output power	430 kW
Villages served	Ikondo, Nyave, Ukalawa, Isoliwaya, Kanikele
Distribution network	47 km of MV (in 2015)
Households connected	280 (in 2015)
Public institutions and economic activities connected	75 (in 2015)
Aqueducts powered	1
Connection with TANESCO	Yes (in 2015)

What next: the future project of Ninga SHPP

At CEFA we are now aware that only with a qualitative jump we can achieve such an impact to be incisive for a large population that needs energy access. It was therefore decide to take advantage of the opportunities and instruments that are in place now in Tanzania to design a new project, which size and impact significantly differ from the previous ones. The site for the next is in the district of Njombe, Njombe Region (former Iringa), Rufiji River Basin. The interested river is the South Ruaha, affluent of the Mnyera river.

Summary details (FORESEEN)	
Type of facility	Run-of-the-river small hydro plant
Commissioning year	2017
Proposed financial model	Developer equity; credit lines; grants from European Union, REA, etc and commercial loans
Ownership	To be handover to local entity
Output power	4,000 kW
Villages served	Ninga, Lima, Isitu, Ikuna, Lole, Upami and Ilengitu
Distribution network	18 km of MV
Households connected	1680
Public institutions and economic activities connected	268
Connection with TANESCO	Yes