

Executive summary

Having regard to the overall goal of the Renewable Energy Programme Area of the EEA FM 2009-2014, which had been set in the MoU (Memorandum of Understanding) in March 2012, the GALa Programme will contribute to the increase of geothermal energy production in Azores and to the improvement of capacity at national, regional and local level in the renewable energy field. The aim of the GALa Programme is to contribute to the fulfilment of the MoU and give a transparent and clear framework to the implementation of the relevant outcomes. Bilateral relations between the Beneficiary State and the Donor States are one of the overall objectives of the EEA FM implementation.

To achieve the overall goal of the Programme Area the Programme Proposal will directly contribute to the following two outcomes:

- 0602: Increased renewable energy production
- 0606: Improved capacity at national, regional and local level on renewable energy solutions

The **0602 outcome** will be reached promoting projects that aim to generate electricity through the exploitation of high enthalpy geothermal resources, through the installation of new electric generation units, provided that the PO of PA6 is the company of electricity in Azores. These projects meet the specific concern stated in the MoU that designates that the program should focus on geothermal energy. This initiative is fully in line with the overall goal of the EEA FM to reduce social and economic disparities, acting in the area of the climate change and renewable energy by replacing fossil fuel. The majority of the available budget (4 090 319 EUR) will be allocated for this outcome.

Due to the characteristics of the power market in the Azores, the transmission and distribution of electricity on the 9 Islands of the Archipelago are ruled by a concession contract, celebrated between the Programme Operator (PO, EDA - "Electricity of Azores" Limited Company) and the Regional Government of Azores, on an exclusive basis. Although there is an exclusive concession contract for the transmission and distribution of electricity in the Azores, the generation of electricity is an open market and the producers sign a power purchase agreement with EDA.

Even though it is an open market for electricity, the PO decided to have a predefined project because as per the Law-Decree nº 90 of 16th of March of 1990, the geothermal resources are owned by the government and its exploration and exploitation are included under the legislation that rules the use of the geologic resources, and is governed by a specific Portuguese Law-Decree, nº 87 from 16th of March of 1990, that foresees special permits to develop either activity. These permits in the case of the Azores are given by the local governmental authorities that support the competitive and investment activities (DRAIC - *Direção Regional de Apoio à Competitividade e Investimento*). Furthermore, to build and operate a power plant a power plant license is needed from the Regional Energy Office (DRE - *Direção Regional de Energia*). According to the statements of DRAIC and DRE, that can be found in Annex XVII, there are already promoters on an exclusive basis, with licences to endeavour the projects that aim to increase geothermal generation on São Miguel and Terceira Island. The exploitation of the geothermal resources for power generation is only feasible on the former Islands, where the Government of the Azores aims to increase geothermal generation (3 MWe) on Terceira Island and increase geothermal generation on 5 MWe at São Miguel Island.

The 0602 outcome will be reached, through pre-defined project, the purpose of which is to give grant assistance to the construction of a Geothermal Pilot Power Plant of 3 MWe on Terceira Island. The construction of the pilot geothermal plant it is conditional to the feasibility and sustainability of the geothermal resource available. For this purpose the promoter will have to demonstrate the availability of 25 thermal Megawatts. If the available thermal energy does not meet the expected value, a contingency plan for the funds is already in place and it is related with the expansion of the geothermal installed capacity in 5 MWe on São Miguel Island. For this propose a new application will be submitted to the PO.

The general framework and structure of the 0602 outcome can be seen in the following table:

Outcome	Priority axis	Indicators	Budget [€]
0602 - Increased renewable energy production	3 MW capacity RES constructed and in operation	Estimated Co2 reduction and/or avoidance in tonnes/year	4 391 819
		Estimated electricity generation in GWh/year	

The **0606 outcome** will be reached through open calls for applications, which will be adequately published to reach the potential target groups and ensure transparency. Before the sign of the MoU the national government of Portugal approached the regional government of Azores to take the whole programme over contributing the total cofinancing needed for the programme under the assumption that the programme will exclusively focused on geothermal development for electricity generation in Azores. Hence, the Programme is focused on supporting the construction of geothermal power plants and higher education supporting that endeavour. The 0606 outcome is to be achieved through a SGS. This single small grant scheme will consist of two pillars to reach the overall goals of improved capacity at national, regional and local level on renewable energy solutions. The general framework and structure of the 0606 outcome can be seen in the following table:

Outcome	Priority axis	Pillar I.	Pillar II.	Indicators	Budget [€]
0606 - Improved capacity at national, regional and local level on renewable energy solutions	Improved capacity at regional level on geothermal energy solutions through a SGS	Improving geothermal capacity at professional level through short courses organized by the UNU-GTP and with bilateral cooperation	Improving geothermal capacity through UNU-GTP	Number of persons from beneficiary state that have completed training/studies, who received support from a programme.	402 000

The initiatives will cover activities at professional and post-graduate 6 month training courses. They will also contribute to lifelong learning, which is absolutely a necessity in such an innovative field like renewable energy technology. One of the main purposes is to ensure that knowledge acquired by the participants can be directly put into practice in their respective

field. Preferably, and to improve the capacity in the Azores, the studies and respective papers to be published should be focused on the existing geothermal projects located in the Azores

This outcome focuses on strong bilateral cooperation with the donor states. For the Pillars I and II cooperation with the United Nation University Geothermal Training Programme (UNU-GTP) will be carried out. Through these initiatives networking, exchange, sharing and transfer of knowledge, technology and experience will be encouraged to enhance bilateral relations among the states.

The improved capacity at regional level on geothermal energy solutions is intended to be reached through open calls for applicants. These calls for applications will be available annually depending on the conditions defined by the educational institutions running the programmes and on the available budget.

The total amount of the small grant scheme is € 300 000 for pillar I (estimated) and € 102 000 for pillar II (€ 402 000 all together). The initiative for Pillar I, courses held in Ponta Delgada, Azores, will be available for the employees of the companies related with the industrial exploitation of the geothermal resources, students with experience in geothermal energy utilization and students from the Azores University involved in geothermal energy utilization. In this Pillar I, students with experience in geothermal energy utilization and students from the Azores University involved in geothermal energy utilization, after being selected, are invited and pay nothing to attend those courses. The initiative for Pillars II will be available for the employees of the companies related with the industrial exploitation of the geothermal resources. In Pillar II, courses held in Iceland, each selected candidate must pay 15% of the cost of participation/person to attend that course. The goal with this is to make sure that candidates demonstrate willingness to attend such courses.

The GAIA Programme is basically twofold – as it is described above – and will be designated for projects which contribute to the overall goal of the EEA Financial Mechanism and the Azorean strategies. One of the main approaches of this proposal is to create a consistent framework for such a focused programme which support transparent programme development and can contribute to the smooth implementation of projects.