

In-Depth Assessment of the Energy Efficiency Potential in Cyprus

Theodoros Zachariadis*^a, Apostolos Michopoulos^a, Yannis Vougiouklakis^b, Benjamin Struss^b,
Katerina Piripitsi^c and Christodoulos Ellinopoulos^c

^a *Cyprus University of Technology*

^b *GIZ Deutsche Gesellschaft für International Zusammenarbeit*

^c *Ministry of Energy, Commerce, Industry and Tourism of the Republic of Cyprus*

Abstract

This paper presents results from the first in-depth study on the energy efficiency potential in Cyprus. Different energy models were combined in order to conduct simulations and provide recommendations to national authorities so that Cyprus can meet its targets in the frame of the EU energy and climate policies. The study assessed both the maximum theoretically available potential for energy efficiency improvements and the economically viable potential, and then translated these assessments to aggregate energy demand forecasts. The analysis shows that Cyprus cannot continue along a 'business-as-usual' path in improving the efficiency of its energy system if it is to achieve the EU decarbonisation goals for year 2030 and beyond. In theory, there is a large potential to increase the energy productivity of the Cypriot economy, its exploitation requires a very substantial mobilisation of financial resources, at a rate that has not been observed in the past. An intensification of smart financial tools to enable energy efficiency investments, coupled with a green tax reform that will gradually implement a carbon tax while reducing the tax burden of labour, can facilitate a smooth transition to a low-carbon economy.

Keywords: Building renovation; Decarbonisation; Energy forecast; Energy saving potential.

* Corresponding Author. Address: P.O. Box 50329, 3603 Lemesos, Cyprus,
Email : t.zachariadis@cut.ac.cy