## Biogas in Portugal: status and public policies in a European context

Miguel Ferreira<sup>a</sup>, Isabel Paula Marques<sup>b</sup> and Isabel Malico<sup>a,c,1</sup> <sup>a</sup>Physics Department, University of Évora, R. Romão Ramalho, 59, 7000-671 Évora, Portugal E-mail: miguel.flf@gmail.com <sup>b</sup>LNEG – Laboratório Nacional de Energia e Geologia. Lisbon, Portugal E-mail: isabel.paula@Ineg.pt <sup>c</sup>IDMEC/IST, Technical University of Lisbon, Mechanical Engineering Department, Av. Rovisco Pais, 1049-001 Lisbon, Portugal Tel.: +351 266 740 800; Fax: +351 266 745 394 E-mail: imbm@uevora.pt

## Abstract

The current status and legal framework of biogas production in Portugal are analyzed and compared to that of five other European countries, characterized by wideranging diversity of substrates and biogas applications. With this comparison, and with the calculation of the biogas energy potential in Portugal, the authors want to assess the significance of developing the Portuguese biogas sector. This study illustrates that the highest biogas feed-in tariffs are applied in the countries with a more developed sector. In Portugal, despite the fact that the organic effluents are a relevant energy source (873 Mm<sup>3</sup> biogas year<sup>-1</sup>; 4889 GWh year<sup>-1</sup>) and that new feed-in tariffs were established, biogas valorisation is still at an early stage. The importance of anaerobic digestion was only recognized in 2007 and the present installed power is about 10% of the potential electrical power (229 MW). Therefore, it is desirable to strengthen the national and regional biogas market.

Keywords - Anaerobic digestion; biogas; policy

<sup>&</sup>lt;sup>1</sup> Corresponding author