



# Deliverable C1.4

## Social Impact Assessment

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■ Author(s)	: Andrea Mazzoleni
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# 1 Introduction

## 1.1 The domestic appliances industry in EU

The domestic appliances industry is an important part of the EU28 economy with a wider value chain and 211.000 direct employees in 2012 as well as 3.600 firms (20% SMEs). The “*footprint*” is *direct*, i.e. in terms of number of firms, staff employed and revenues generated, *indirect*, i.e. in terms of supply and consumption of intermediated goods to and from other sectors and “*external*” i.e. in terms of trade flows.

The externalities of the industry are wider with impacts on employment, GDP, wages, R&D as well as government revenues and other variables. The industry contributes also to social benefits: energy efficiency is a driver to foster innovation (Ecofys, 2014) and to reduce the environmental impact either in production as well as in the use of domestic appliances with benefits on final consumer costs. (“*The Economic Impact of the Domestic Appliances Industry in Europe*” - CECED, 2015).

## 1.2 Regulations

In January 2015, the Commission Delegated (EU) N.65/2014 supplementing the Directive 2010/30/EU with regard to the labelling of domestic oven and range hoods as well as the Commission Delegated (EU) N.66/2014 implementing the Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for domestic oven, hobs and range hoods have started to be applied.

Specifically, energy label is intended to enable customers to take into account the energy performance in their purchase process whilst Ecodesign to push the market toward the more energy-efficient products. Either these regulations have been taken into account in the framework of the HEO project.

Worthy to note - according to the EU “*Evaluation of the Energy Labelling and Ecodesign Directives*” (July, 2015) - consumers evaluates in their decision to buy an appliance energy efficiency among the most important purchase drivers (see, for further details Ecofys, 2014).

# 2 Social Impacts

HEO has demonstrated the possibility to improve the energy efficiency of a domestic electric oven, achieving an energy consumption below 500 Wh thus to be compliant with A++ classification in the new Energy Label scheme. According to the above mentioned scenario, the indicated outcome could be translated into a relevant socio-economic externality: indeed, according to an estimation carried out by the School of Chemical Engineering and Analytic Science of the University of Manchester, a 20% improvement in energy efficiency would mean a saving of around 5 TWh of electricity per year in Europe. In particular, it has been estimated the impact of electricity consumption in the use stage: results suggest how for every 0,1 kWh increase in energy efficiency



of HEO, 115 kg CO<sub>2</sub> eq. and €37 are saved over the oven's lifetime of 19 years. Though it may appear not significant for a single oven, at the European level these savings could be relevant.

HEO has further demonstrated the possibility to substitute the traditional enamel with an alternative coating during oven's manufacturing; benefits are twofold: the new coating allows to reduce the energy requirement during manufacturing and to avoid toxic substances contained in traditional enamel, e.g., nickel and cobalt. This latter result, may potentially contribute to improve human health as well as to reduce welfare costs in EU28.

### 3 References

*“Evaluation of the Energy Labelling Directive and specific aspects of the Ecodesign Directive”*, Ecofys – June 2014;

*“The Economic Impact of the Domestic Appliances Industry in Europe”* (Report for the European Committee of Domestic Equipment Manufacturers CECED - April 2015);

