



Life cycle assessment of a domestic cooker hood

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ABSTRACT

A life cycle assessment (LCA) of a domestic cooker hood was conducted. Cradle-to-grave analysis was performed using the GaBi software with Eco-Indicator 99 (Egalitarian Approach). The most polluting phases were “manufacturing” and “use”, the environmental impact being affected especially by production materials and the electricity consumed during the product’s lifespan. The study also highlighted that the hood’s environmental impact is closely related to the local power grid mix. This aspect was further analyzed by entering the data for operating it both in Italy and in France. Finally, the improvements obtained by replacing the single-phase electrical motor with an inverter-driven three-phase induction one and the halogen lamps with Light Emitting Diode (LED) lamps were assessed with the LCA. These changes entail an improvement of the environmental impact of 36% in Italy and of 24% in France.