Exergy analysis of the energy use in Greece - DTU Orbit (06/10/2019)

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In this work, an analysis is being done on the concept of energy and exergy utilization and an application to the residential and industrial sector of Greece. The energy and exergy flows over the period from 1990 to 2004 were taken into consideration. This period was chosen based on the data reliability. The energy and exergy efficiencies are calculated for the residential and industrial sectors and compared to the findings of a previous study concerning the exergy efficiency of the Greek transport sector. The residential energy and exergy efficiencies for the year 2003 were 22.36% and 20.92%, respectively, whereas the industrial energy and exergy efficiencies for the same year were 53.72% and 51.34%, respectively. The analysis of energy and exergy utilization determines the efficiency of the economy as a whole. The results can play an important role in the establishment of efficiency standards of the energy use in various economy sectors. These standards could be utilized by energy policy makers.

General information
Publication status: Published
Organisations: Intelligent Energy Systems Programme, Risø National Laboratory for Sustainable Energy, Aristotle University of Thessaloniki, University of Western Macedonia
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Pages: 2475-2481
Publication date: 2011
Peer-reviewed: Yes

Publication information
Journal: Energy Policy
Volume: 39
Issue number: 5
ISSN (Print): 0301-4215
Ratings:
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 3.35 SJR 1.578 SNIP 1.908
Web of Science (2011): Impact factor 2.723
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
Original language: English
Keywords: Intelligent energy systems
DOIs: 10.1016/j.enpol.2011.02.012
Source: orbit
Source ID: 275488
Research output: Contribution to journal › Journal article – Annual report year: 2011 › Research › peer-review