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LCE > Vol.2 No.2, June 2011

OPEN ACCESS

Energy Efficiency Regulation and R&D Activity: A Study of the Top Runner Program in Japan

PDF (Size: 138KB) PP. 91-98 DOI: 10.4236/lce.2011.22012

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ABSTRACT

The Top Runner Program, a new approach to enhancing the energy efficiency of appliances and vehicles, has been introduced in Japan. In this paper an empirical analysis of the impact of the program and the labeling systems on firms' R&D efforts is carried out. The results show that the Top Runner Program and the labeling system for appliances led to increases in R&D expenditures by appliance producers. The program combined with the labeling system caused a 9.5% increase in appliance producers' R&D expenditures. However, the Top Runner Program and the labeling system for motor vehicles had little or even a negative effect on the innovative activity of motor vehicle manufacturers. R&D expenditures by motor vehicle producers may have increased in response to the exhaust gas regulation for diesel-powered vehicles rather than the energy efficiency regulation.

KEYWORDS

Top Runner Standards, Energy Efficiency, R&D

Cite this paper

M. Hamamoto, "Energy Efficiency Regulation and R&D Activity: A Study of the Top Runner Program in Japan," *Low Carbon Economy*, Vol. 2 No. 2, 2011, pp. 91-98. doi: 10.4236/lce.2011.22012.

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