

Document de treball de l'IEB 2014/31

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Energy Sustainability

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The **Chair of Energy Sustainability of the University of Barcelona-IEB** is funded by the following enterprises ACS, CEPSA, CLH, Enagas, Endesa, FCC Energia, HC Energia, Gas Natural Fenosa, and Repsol) through FUNSEAM (Foundation for Energy and Environmental Sustainability).

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ABSTRACT: Relevant advances in the mitigation of environmental impact could be obtained by the appropriate diffusion of existing environmental technologies. In this paper, we look at the diffusion of knowledge related to environmental technologies developed within the oil and gas industry. To assess knowledge spillovers from oil and gas inventions as a measure of technology diffusion, we rely on forward patent citations methodology. Results show that there is a strong likelihood that the citing patent will be eventually linked to environmental technologies if the original oil and gas invention has already environmental uses. Moreover, both intra and intersectoral spillovers produce a "turnabout" effect, meaning that citing patents show the opposite quality level of the cited patent. Our results support the idea that more sector-specific environmental policies, with an emphasis on diffusion, would significantly improve the use of environmental technologies developed within the oil and gas industry.

JEL Codes: Q4, Q55, O31

Keywords: Forward patent citations, petroleum industry, environmental and technology policies

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