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**INTERNATIONAL ENERGY R&D SPILLOVERS AND THE
ECONOMICS OF ATMOSPHERIC STABILIZATION**

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Technological change is widely recognized as having an enormous potential in reducing GHGs emissions without, or just partly, negatively affecting growth. The arguments in favour of fostering technology innovation and diffusion are often linked with those related to the issue of burden sharing of climate change abatement costs. The transfer of more energy efficient and less carbon intensive technologies from developed to developing countries can be envisaged as a way of cutting emissions in an economically sound way, with some ethical appeal to it. However, the process of knowledge diffusion may also have negative effects, by providing negative incentives to R&D investments. In this paper, we aim at discussing the above issues by measuring the effects on costs of stabilizing GHG emissions of different assumptions on international energy technology spillovers. The modelling framework proposed in this paper can also be used to assess the consequences of policies designed to enhance technology spillovers (for example, as in the Asia-Pacific agreement). Our analysis is performed using WITCH, a dynamic regional model of the world economy model in which technical change is endogenous and the free-riding incentives deriving by the non complete appropriability of knowledge are accounted for.