

CO₂ Abatement Policy with Learning-by-Doing in Renewable Energy

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This paper analyses the implications of CO₂ abatement when there is endogenous technological change in renewable energy. A numerical model is proposed that reflects two basic assumptions about technological progress in renewable energy: First, that there is learning-by-doing so that unit costs of production are a decreasing function of cumulated output. Second, that production in this sector is highly capital-intensive and technological progress only benefits new vintages of capital. It is found that technological progress in renewable energy markedly lowers the total and marginal costs of abatement, but does not significantly affect the timing of abatement efforts.