This paper starts by the analytical exploration of a stylised one-good economy, to which some carbon pricing is applied. It demonstrates that this carbon pricing is univocally detrimental, regardless of the parameterisation of the stylised economy. It then demonstrates how accounting for endogenous technical change invalidates the former result, leading to an equivocal outcome in terms of output or revenue. A second part of the paper uses the numerical model IMACLIM-S to explore how this result applies to a simulated European economy, in which energy is disaggregated from the aggregated macroeconomic good. It develops sensitivity analysis on key parameters of technical change, the labour market and the efficiency of decarbonisation, to clear out the ambiguity of the theoretical result.