Modelling the energy sector is not a simple business, and requires an extension of the theoretical framework well beyond the present paper. Nevertheless, some insights into the issues raised by this comment can be already derived from the present version of the paper.

If the energy system is based on fossil fuels, eco-efficiency is low, because carbon is extracted from its natural deposits and is "lost" into the atmosphere for an energy service to be delivered. If innovations contribute to increasing energy efficiency, less carbon is "lost" for the same energy service, which is tantamount to saying that a "new" source of energy has been opened for the economy, namely energy efficiency. Reduction of carbon waste is equivalent therefore to increased energy efficiency. This fits quite well into the framework of the paper, since a reduction of carbon emissions is an expression of a rise in eco-efficiency and therefore a benefit of human capital accumulation.

If engineering knowledge and innovations improve the quality of solar capital, more energy can be extracted from the same capital stock. Innovations in the solar energy sector provide an additional source of energy and fit therefore also well into the paper framework.