

# RECYCLING & WASTE MANAGEMENT

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## Impacts of waste treatment management modes on products' prices by sector: A case study for china waste water treatment

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In this paper, a model to evaluate the change of prices of green products by sector compared with their traditional prices in 2 waste treatment management modes is established. The criterion is provided for the choice of the waste treatment management mode; this is accomplished by considering waste treatment costs as well as making full use of each product's price advantage all within the context of the macroeconomic system. The model is applied in wastewater treatment case in China. The changes in prices for 42 sectors in 4 scenarios are evaluated. The results reveal that the price for each sector's green product increases compared with that of its more traditional product. At the sector level, the price increases for Oil and gas extraction products, Metal products, machinery and equipment repair services, Petroleum, coking products and nuclear fuel processing products ranked in the top 3 in scenario 1. In the other scenarios, their ranks are different. The results further

show that the price increases of 22 sectors are mainly caused by other sectors' added waste water treatment costs. The change of prices for green agricultural products would have a significant impact on their demands, in some cases, causing their annual demands to decrease. From the perspective of price advantage, the producers and administrative organizations are encouraged to consider the combination of two waste treatment management modes for 42 sectors. To limit the waste water discharged in China, one possible intervention would be to increase the fine imposed for unit waste water discharged, setting it at a higher level than the unit waste water discharge fee and its treatment cost. Furthermore, it is suggested that the waste water treatment cost needs to be reasonably incorporated in the products' prices, a suggestion that can be adopted in the model used in this paper.

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