

Carbon Emission Reduction by Compact City Construction in Toyama, Japan

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Abstract : Compact city construction is considered as an effective measure to reduce carbon emission in city lives. Toyama City started its compact city strategy in 2000 and was selected as a Japanese Environmental Model City in 2008 for its achievement. This paper takes Toyama as a study case, aiming to find how city policies affected people's life styles and reduced carbon emission. The main materials used in this study are first-hand documents, like urban planning materials, government annual report and statistic data from transportation association. It is found that the main measures taken by Toyama City include the construction of light rail transit, increasing the frequency of buses, building park and ride parking lots. In addition to hardware facilities, it also offers flexible policies like passengers' coupons for the senior citizens and free use of parking lots by buying shopping vouchers. Besides, Toyama City encourages citizens to live within 500 meters of public transportation. People who buy an apartment near public transportation will receive 500,000 Japanese Yen. These measures have proven to their effects. Compared with 2005, in 2014, the transportation sector reduced emissions of 2.35 million tons of CO₂, 13.6%. This aspect is related to the increase in the number of cars in public transport and also related to fuel improvement.

Keywords : Toyama, compact city, public transportation, CO₂ reduction

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