
ENERGY-PLUS DOWNTOWN

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Abstract

The climate crisis will be the main driver of social pressure in the next twenty years, and the production of food is the biggest single component of CO₂ emissions (and already today one billion of seven people lives below the minimum necessary to nutrition).

In New Zealand the climatic condition, food production and the residential density are extremely favorable. New Zealand may therefore represent a perfect case study in which to test new sustainable urban strategies.

In view of increasing population of at least two billion by 2050, it is essential to safeguard the availability of the soil for sustainable food production.

Increase the housing density, in already urbanized areas and make them energy self-sufficiency is an absolute need.

One of the strategies that can guarantee results, in the short term, is the retrofitting of the downtown fabric through “Energy-Plus” interventions, acting to transform the urban districts themselves in power generators.

The present study provides for the application of this approach in Auckland City Central through sampling of some districts, in order to verify, for the power generation, what are the benefits in terms of comfort, reduction of Heat Island Effect and better seismic response of the buildings.

Reference

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