

The Road Towards Energy Neutral Cities

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The transition towards a renewable energy supply needs a lot of coordinated effort. In the first place one needs to define the ultimate goal. For this future projection of the city one needs to organise support and commitment of all stake holders. One should convince people that it is not only necessary to reach such an end goal because of climate effects and shortage of energy but it will be also pleasant to live in such a city and it has enormous economic advantages.

As soon one agrees on the end goals one can apply back-casting and fore-casting techniques to fill in the roadmap towards energy neutrality. Back-casting means to figure out what is necessary now and later on step by step to reach the end goals. Fore-casting means collect learning experiences from the best-practices all over the world to know what is possible and look by extrapolation and monitoring which goals can be reached on the long term.

The best practices can be derived for instance from the IEA, Annex 51 “Energy Efficient Communities”. At the South University we developed a bottle-neck analysis to optimise the knowledge transfer between cities and to derive the necessary measures, research programmes and innovations. At the South University we are constructing the “District of Tomorrow” together with students and companies as a transition project to demonstrate what is possible, to educate students, to enable an innovation platform for companies and organise cooperation between all stakeholders. Several results of the integration of renewable energy in the built environment are already copied in real districts in the EU region.