

SMART CITY HARTBERG: SMART CITY DEVELOPMENT ON SMALL-TOWN SCALE

Kraussler Alois, 4ward Energy Research GmbH, (43 664) 88500339, alois.kraussler@4wardenergy.at

Overview

The minor city of Hartberg (inhabitants: approx. 11,000; urban area: approx. 10 km²; annual energy demand / CO₂ emissions: 346 GWh / 85,900 t) faces the challenges as one of 6 Austrian SMART CITIES within the promotion programme “smart energy Demo – fit for set”. In opposition to Hartberg major cities have significant different framework conditions to demonstrate a smart city: The modal split has a higher car share, subways and tramways are not relevant. The (distributed) energy supply can be provided easier by the surrounding. Compared to bigger cities several more demonstration measures can be carried out in parallel with fewer complexity and consequently a lot of topics can be addressed at once (buildings, energy supply and grids, disposal, mobility, ICT, participation process etc.). The available resources (human beings, energy, financial, time, buildings/infrastructure, economy etc.) are limited.

Problem: For minor cities significant other actions are necessary to encourage demonstrations / investments for the establishment of a minor SMART CITY of the future.

Main goal: The overall goal is the implementation of a suitable approach to demonstrate a zero emission district at downtown of Hartberg by outstanding showcases of “green” technologies and measures to support an expansion to the surrounding.

Methods

1. Step: Technical feasibility study to define the status quo of the city (energy supply, RES and efficiency potentials, grid-capacities, CO₂-emissions, relevant stakeholders / investors etc.). Roadmaps and action plans according to Hartberg’s vision have been established by a bottom-up- & interdisciplinary approach with more than 70 organisations.
2. Step: Implementation of more than 10 demonstrations linked to each other (incl. business models).
3. Step: Steady monitoring and evaluation measures (incl. revision / improving loops).
4. STEP: Accompanying research activities (technical, social and economic orientated).

Results

Minor cities show a significant potential for realizing a climate-protecting and sustainable environment. However the activation needs to overcome several challenges, that are different to major cities. In Hartberg these differences could have been turned into advantages / factors of success: The closer contact to the citizens and stakeholders supports an ideal living lab approach (“user in the loop” & e-participation). The project development stage (establishment of the feasibility study) was much more time-consuming as proposed, because the comprehensive bottom-up approach involved more than 200 meetings. But this has been resulting in a very high motivation of the stakeholders, whereas a balanced bundle of demonstrations could have been provided.

Conclusions

Hartberg does not follow the implementation of single, but linked solutions. Hence compared to major cities several more topics and integrated demonstrations could have been addressed. For several investments the city of Hartberg acts as pre-commercial procurer. By these public pre-investments several private investors could have been encouraged to spend their money in smart city relevant projects. Thus a strong (financial) commitment of the city government enables leverage effects for private investments even in minor cities (despite fewer economic growth potential than in bigger cities). Several experiences / proceeding recommendations for sustainable developments on small-town scale have been found. Thus „Smart City Hartberg“ has already overcome several challenges to establish a minor city of the future.

This project was subsidised within the research and technology program ‘smart energy demo’ (2nd Call). This program is conducted by ‘The Austrian Climate fund’.