1.1 Abstract

c) fünfzeilige Kurzfassung (Synopsis) auf englisch

The municipality of Großschönau wants to play a pioneering role with regard to climate protection and reduction of CO_2-emissions. The basis of the way towards CO_2-neutrality lies in the accurate analysis and assessment of different climate friendly measures from an Austrian wide unique detailed survey amongst all households with regard to their energy consumption (heating, electricity, mobility, etc.).

d) Kurzfassung auf englisch

The municipality of Großschönau wants to play a pioneering role in combating climate change and has given itself the ambitious objective of meeting all its energy demand CO_2-neutral with locally produced renewable energy. The consequences of these CO_2 emissions, the anthropogenic greenhouse effect, are scientifically proven and will have massive effects on our lives and on state of planet Earth if, in the near future, no measures are taken to reduce or completely stop this process. This will take place thanks to the implementation of energy efficiency measures coupled with the deployment of renewable energy sources. Initial efforts will focus on maximising energy efficiency as this reduces energy demand and allows for an optimal design of renewable energy production facilities.
The target of the *EVG – Zero Carbon Town* project is the development of a strategy for the municipality of Großschönau to meet the ambitious challenge of reaching a CO_2 neutral supply of energy. The project will begin with an analysis of the current situation within the municipality, to acquire an understanding of the current consumption and supply of energy.
The status analysis can be done in detail because of the accurate data out of the energy questionnaire done by the municipality.

The data show a unique high quality due to the high rate of return and the density of requested information. With regard to energy data, the survey covered the type and amount of energy for heating and hot water production, energy index or building specific data, distances and amount of fuel for mobility, electricity demand and renewable energy generation by end-users as well as the available resources (biomass, unused roof area). In addition, this detailed data basis provides the possibility to create in following steps five different scenarios based on real data to get more accurate results.

The assessed potential for the production of renewable energy within the whole of the municipality avoids an overestimation of its availability in future work packages. Five different scenarios will then be determined, each focusing on different aspects of the production of renewable energy. The subsequent simulation of the scenarios will show which model is, regarded to economy and feasibility, best suited to help the municipality of Großschönau achieve a maximal reduction of CO_2 emissions and meet a high proportion of its energy consumption by its own local production of renewable energy. Equally important in the *EVG – Zero Carbon Town* project is the economic analysis of the proposed model in order to determine whether it is financially possible for the municipality to meet its challenge. During a final workshop the results of the simulated model chosen for the municipality of Großschönau and its economical analysis will be used to disseminate the methodology elaborated to meet the municipality's target of carbon neutral energy supply. Out of the project results the sensitisation of the inhabitants should be strengthened and required conditions for realisation should be created by politics.

The knowledge acquired during this project and the pioneering role played by the municipality of Großschönau will pave the way for other municipalities in similar rural regions. In connection with the research of the regions Murau and Salzburg, transferability is given to all of Austria. The project will demonstrate that supplying a rural municipality solely with locally produced carbon neutral energy is possible and thus contribute significantly to the combat against climate change.