

## RESYS project - a few clicks to regional energy autarky



Data of Your Paper

**Topic**

- Resilience
- Lifestyle
- Building
- Resources
- Tourism
- Energy

**Title of the Paper**[RESYS project - a few clicks to regional energy autarky](#)**Form of Presentation**

- Poster
- Presentation

**Short Description** (maximum 2500 characters)

Considering climate change and challenges in the field of energy supply, national and European policies stress the necessity of an energy transition. This especially means reduction of greenhouse gases, increasing significance of energy efficiency, energy-self-sufficiency and preference of renewable energy sources. As this transition requires reliable data and strategies, the project targets at providing a tool which facilitates this process for municipalities and regions.

The consortium, consisting of energy consultants, IT specialists with a focus on sustainability and scientific institutes, aims to develop a mathematical model, which assesses the possibilities for municipalities to become energy-self-sufficient. Compared to currently available models, it will include 1) local factors, such as climate, land available for biomass and photovoltaics (also considering land competition between food and energy), 2) energy consumption statistics, taking daytime and seasonal fluctuations as well as energy storage requirements into account, 3) sectoral energy saving potentials and 4) estimations of investment and running costs. The model will be implemented as a web-based tool.

The project started in July 2011 and is planned to end in June 2013. During the upcoming months the database will be filled and the detailed tool concept as well as the calculation model will be completed. Primary steps involve the identification of renewable resources and their potential for energy production, the analysis of time sequences of productivity of renewable energy sources and the modelling of storage demand. Concerning energy needs demand charts will be generated, based on energy demand profiles for different sectors, and reduction measures modelled. This will be followed by an evaluation of the model, applying it to three case studies carried out in different Austrian municipalities.

After its finalisation the RESYS-Tool will support strategic energy planning of municipalities and regions. It will allow for an easy to handle web-based calculation of

local (renewable) energy supply and demand. Furthermore it will enable users to consider efficiency enhancements as well as behavioural change as part of their process to become self-sufficient. In the long run the tool may contribute to increased public awareness in the field of climate protection and renewable energies. A special version of the tool will be provided to support educational and scientific activities.

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