

**Special Session:  
Renewable Energy Self-Sufficiency (RESS) – An Interdisciplinary Approach**

**Chair:** Dr. Chantal Ruppert-Winkel

Without regional engagement, politically agreed upon climate change goals as well as energy policy objectives cannot be achieved at a higher level. Regional self-sufficiency attained with the help of electricity and heat from renewable energy (RE) in combination with energy saving behaviors can make a significant contribution. Many communities and regions in different countries have accepted these challenges and have created the objective of reaching energy self-sufficiency through the use of renewables. Moreover, a considerable number of research projects is now dealing with this issue. For the implementation of RE self-sufficiency (RESS) objectives, however, numerous ecological, economic, technical, and social factors have to be taken into consideration, making an interdisciplinary analysis indispensable. However, what is lacking the most is a coherent approach to the topics from different fields.

The transformation of energy systems to a more decentralized structure based on RE is characterized by new technological opportunities, greater citizen involvement, regional energy supply, the chance for added value created in the region, and employment, as well as by political decision-making processes that are increasingly taking place in local governments. Simultaneously, RESS faces the challenge of being socially, ecologically, and economically sustainable. This is particularly relevant for the energetic use of biomass due to various competing utilization patterns and the requirements of ecosystem cycles.

This session offers the opportunity to present the subject from different perspectives and discuss it in an interdisciplinary manner. To do so, several important issues related to RE self-sufficiency, such as actor-networks, technical energy supply concepts, and their economics, landscape structure, acceptance, and regional energy-saving activities, will be considered. On one hand, analytical interests will be put forth. Questions about the theoretical and disciplinary perspectives that will be used, and the different methodological approaches available will be asked. On the other hand, the interconnections between the issues, highlighted above, will be made to ensure that the transformation to renewable energy systems will be successful and have long lasting effects. What results already exist? Which dimensions will be explored in detail in the project and which will not?

**Contact:**

Dr. Chantal Ruppert-Winkel

Albert-Ludwigs University of Freiburg  
Centre for Renewable Energy - Zentrum für Erneuerbare Energien (ZEE)  
Tennenbacher Str. 4  
D-79106 Freiburg

Phone: +49 (0)761-203-3792

Fax: +49-(0)761-203-3690

E-mail: [chantal.ruppert@zee.uni-freiburg.de](mailto:chantal.ruppert@zee.uni-freiburg.de)

Homepage:

[www.zee.uni-freiburg.de](http://www.zee.uni-freiburg.de) - [www.ife.uni-freiburg.de](http://www.ife.uni-freiburg.de)

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