

Anika Regett

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Personal information:

Anika studied Industrial Engineering and Management (B.Sc.) at the University of Bremen, Germany. During her Bachelor studies she discovered that her main interest lies in the field of Industrial Ecology (IE) because industry often neglects the linkages of industrial and ecological processes, even though industrial and ecological systems are strongly interconnected and therefore can't be analysed separately.

During the MIND Master programme Anika specialised in IE tools and methods, such as Life Cycle Assessment, while at the same time deepening her knowledge in renewable energy systems. She is passionate about the transition towards a sustainable energy system and is looking forward to contribute not only to the currently on-going German energy transition, but also the necessary cooperation on the European and global level.

Since October 2013, Anika has been employed as a researcher at the 'Forschungsstelle für Energiewirtschaft' (Research Institute for Energy Economics) in Munich, Germany. In that context she works on projects dealing with the integration of renewables into the German electricity grid, energy storage, demand side management etc. She is glad to be able to make use of her IE background by including more life cycle-based approaches into the work of the Institute.

Title of thesis:

Towards a practical application of Life Cycle Sustainability Analysis (LCSA) - a case study on stand-alone water splitting devices for direct solar to fuel conversion

Abstract:

The Life Cycle Sustainability Analysis (LCSA) framework is an approach to address the drawbacks of Life Cycle Assessment (LCA) methodology in the sense that not only environmental, but also social and economic factors are included and a scale-up to larger levels is considered. The aim of this research is to gain practical experience with LCSA and give recommendations for further methodology development. For this purpose the feasibility of a broad system description, as a first step for identifying relevant sustainability aspects of the studied technology and methods for further analysis, is assessed. By choosing a case study on direct water splitting devices (DWSD), which are characterised by a low level of technological maturity, also a first step towards an ex-ante sustainability analysis of DWSD is conducted with the goal to specify criteria which the technology needs to fulfil in order to be a viable option for future sustainable energy supply.

If you are interested in the results of this research or have any other questions, please feel free to contact Anika preferably via LinkedIn.