

Abstract

“Living Lab Walldorf” is a cooperative research and development project, which is funded by the state of Baden-Wuerttemberg according to a notice from 30th November 2015. Living Lab Walldorf was launched on 1st December 2015 and it will run until 31st January 2019. The project addresses the transformation of the German energy market under changing conditions of tariff-, balancing- and regulation systems based on simulative research and a field test situated in the newly built up residential area of Walldorf-Süd. Its objectives are to pilot, test-run, optimize, and evaluate future bounding conditions, services, and technologies for the spread of renewable, decentralized energy systems. This encompasses simulative evaluations of new regulation schemes and prototypical implementations of dynamic performance-monitoring, data visualization, interconnection of flexible devices as well as the exploration of new market roles, e.g. flexibility monetarization. Moreover, the participation of potential end-users and market research are core elements of the project.

With exception of a delay regarding the on-site installations, the project is progressing in accordance with the initial planning. The research scenarios have been defined and differentiated on three levels of action. The modelling of the energy economy is being implemented in compliance with the project requirements. Processes and algorithms for the optimization of flexible energy devices have been designed and are ready for evaluation. Preliminary results of the social research are available and utilized within the Living Lab. The on-site installations in physical and technological matters are completed. The participating businesses and the district storage have been equipped with metrological devices and are providing relevant data.