



# SmartLoad

## Smart Meter Data Analytics for Enhanced Energy Efficiency in the Residential Sector

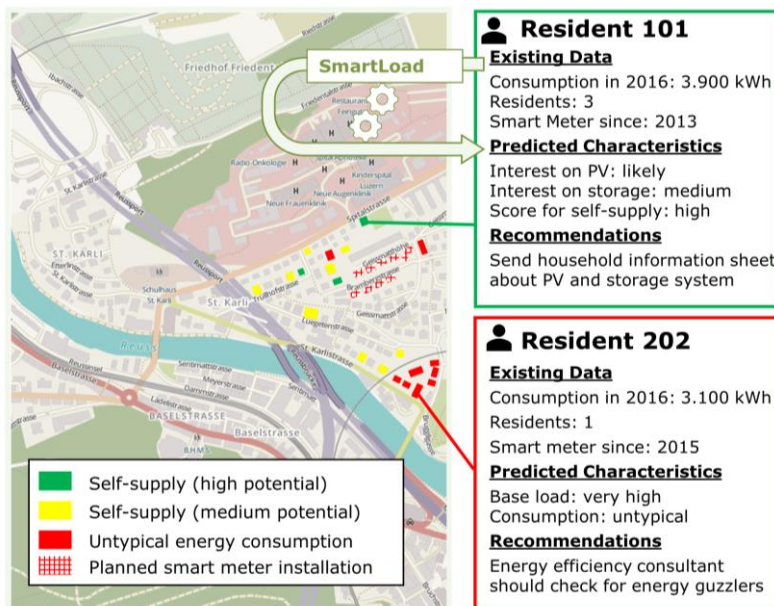
” *Creating value for residents and utilities from smart meter data*

The arising smart metering infrastructure generates large amounts of data about energy consumption in the residential sector. This data contains extensive (hidden) evidence of household characteristics such as saving potential and suitability for self-supply and storage.

Based on 15-min smart meter data as well as additional data (e.g., geographical, soci-geographical, weather, statistical), we develop machine learning algorithms and enhanced analytical methods to automatically derive these characteristics.

Knowledge about customers and their consumption behaviour will serve as starting point towards customer specific services, targeted saving advice, and individual recommendations of efficiency measures.

The algorithms will be tested in field studies to demonstrate their value for customers and utilities.



### Project Duration

01.06.2017 – 30.06.2019

### Project Budget

Total Budget: € 802,378.-  
Funding: € 462,601.-

### Project Coordinator

Energy Efficient Systems Group,  
University of Bamberg (DE)

### Project Partners

- Energy Efficient Systems Group, University of Bamberg (DE)
- BEN Energy AG (CH)
- CKW AG (CH)

### Project Website

[www.uni-bamberg.de/eesys/research/projects/](http://www.uni-bamberg.de/eesys/research/projects/)

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## Main Objectives

Our main objective is to develop algorithms that identify household characteristics from smart meter data. We will test the algorithms in field trials and determine their value for targeted sustainability campaigns and for identifying customers for efficiency and storage products.

In detail, we are going to ...

- identify residents, interested in sustainable products, e.g. eco electricity tariffs,
- analyse the suitability of households for photovoltaic systems, local storage and self-supply solutions,
- detect atypical electrical energy consumption and estimate base load,
- identify load shifting potential and saving potential on a household-individual level.

## Main Results

We strive to achieve the following main results:

- validated algorithms
- usable toolbox for utilities
- clear value proposition

From Local Trials towards a  
European Knowledge Community

<http://www.eranet-smartgridsplus.eu>



UNIVERSITÄT BAMBERG



Bits to Energy Lab

 **BEN Energy**

**CKW.**



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Confederaziun svizra

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**ERA-Net  
Smart Grids Plus**