Comprehensive Open Access Dataset of Sustainable Energy Consumption Initiatives (SECIs) : Deliverable 2.3

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ENERGISE

EUROPEAN NETWORK FOR RESEARCH, GOOD PRACTICE AND INNOVATION FOR SUSTAINABLE ENERGY

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DELIVERABLE 2.3

COMPREHENSIVE OPEN ACCESS DATASET OF SUSTAINABLE ENERGY CONSUMPTION INITIATIVES (SECIS)

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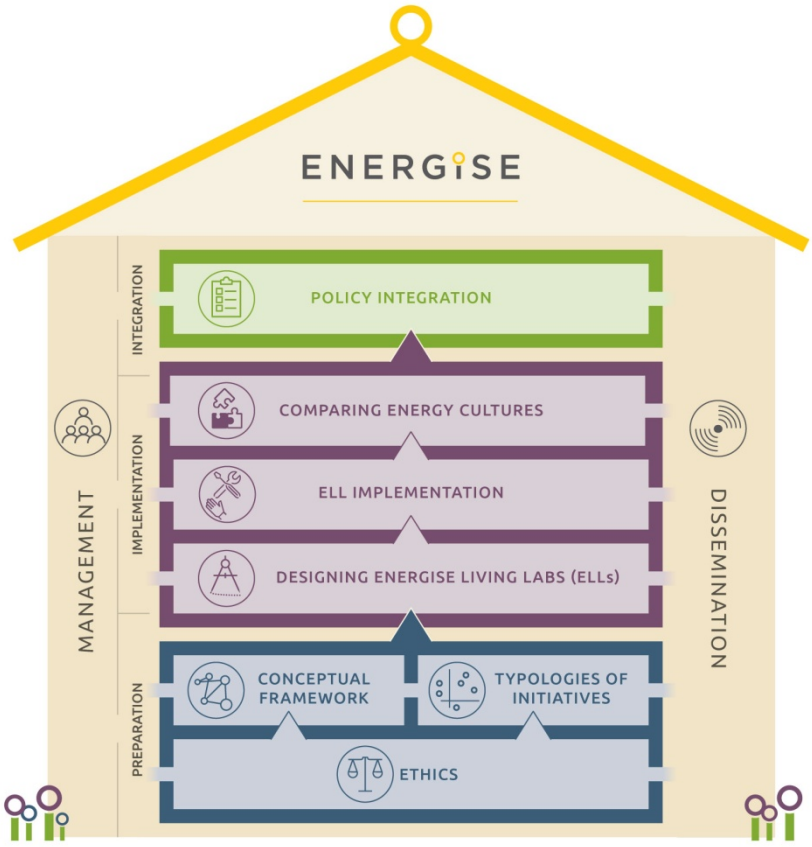
DISCLAIMER

ENERGISE is a Horizon 2020 project funded by the European Commission. The views and opinions expressed in this publication are the sole responsibility of the author(s) and do not necessarily reflect the views of the European Commission.

ENERGISE PROJECT

ENERGISE is an innovative pan-European research initiative to achieve a greater scientific understanding of the social and cultural influences on energy consumption. Funded under the EU Horizon 2020 programme for three years (2016-2019), ENERGISE develops, tests and assesses options for a bottom-up transformation of energy use in households and communities across Europe. ENERGISE's primary objectives are to:

- **Develop an innovative framework** to evaluate energy initiatives, taking into account existing social practices and cultures that affect energy consumption.
- **Assess and compare the impact** of European energy consumption reduction initiatives.
- **Advance the use of Living Lab approaches** for researching and transforming energy cultures.
- **Produce new research-led insights** into the role of household routines and changes to those routines towards more sustainable energy.
- **Encourage positive interaction** between actors from society, the policy arena and industry.
- **Effectively transfer** project outputs towards the implementation of the European Energy Union.



EXECUTIVE SUMMARY

This document (ENERGISE D2.3) provides a background report on the process and result of developing and constructing a comprehensive open access dataset of sustainable energy consumption initiatives (SECIs) that have been collected and assessed as part of Work Package 2 (WP2) in ENERGISE. The process of categorising the SECIs has been undertaken as part of Task 2.2: 'Create innovative and comprehensive open access database' and Task 2.3: 'Mapping and analyses of new database' in WP2 of ENERGISE and Task 7.5 'Supporting communication activities in other WPs, tools development' in WP7 of ENERGISE.

The construction of the comprehensive open access dataset of sustainable energy consumption initiatives (SECIs) is closely connected to the construction of typologies of sustainable energy consumption initiatives (SECIs) as reported on in ENERGISE D2.4 (Jensen et al, 2017b). The open access dataset will display how the identified SECIs have been categorised according to the Problem Framing Typology (PFT).

The dataset is designed as a map that is intended to be a user-friendly device that provides an overview of sustainable energy consumption initiatives (SECIs) in Europe. In particular, the map shows the variety in scope, content and approach in the identified SECIs. The map is not exhaustive, but it is representative for the purposes of the database. The map is meant to be a resource for a wide range of people, as it; 1) provides a systematic overview of the myriad energy consumption initiatives across Europe, 2) provides insights into predominant ways in which energy consumption challenges are framed (*problem framings*), 3) provides a tool for researchers and policy makers and 4) disseminates examples of how SECIs can be framed when taking into consideration a broader range of social, cultural, material and institutional aspects of change related to household energy consumption.

The main function of the ENERGISE Open Access Dataset is to 1) display 1000+ SECIs that actively involves households in change processes, as well as to) 2 display ENERGISE' typological categorisation of the SECIs. The ENERGISE Open Access Dataset does not represent an evaluation of the merits or otherwise of any particular SECI. Further, please note that inclusion of SECIs in the map is not an endorsement by the ENERGISE project or its partners.

1 INTRODUCTION TO DELIVERABLE D2.3

This document (ENERGISE D2.3) provides a background report on the process and result of developing and constructing a comprehensive open access dataset of sustainable energy consumption initiatives (SECIs) that have been collected and assessed as part of Work Package 2 (WP2) in ENERGISE. The process of categorising the SECIs has been undertaken as part of Task 2.2: 'Create innovative and comprehensive open access database' and Task 2.3: 'Mapping and analyses of new database' in WP2 of ENERGISE and Task 7.5 'Supporting communication activities in other WPs, tools development' in WP7 of ENERGISE. The full list of SECIs is provided in ENERGISE D2.1 (Jensen et al. 2017a). The methodology for collecting and assessing the SECIs is detailed in ENERGISE D2.2 (Jensen 2017).

The construction of the comprehensive open access dataset of sustainable energy consumption initiatives (SECIs) is closely connected to the construction of typologies of sustainable energy consumption initiatives (SECIs) as reported on in ENERGISE D2.4 (Jensen et al 2017b). The open access dataset will highlight how the identified SECIs have been categorised according to the Problem Framing Typology as it is presented in ENERGISE D2.4.

Before presenting the process of construction, use and purpose of the open access dataset in more detail in sections 2, 3 and 4, a short introduction to WP2 and its objectives is provided below.

1.1 WP2: TYPOLOGIES OF ENERGY INITIATIVES

ENERGISE WP2 is a systematic criteria-guided review and classification of existing sustainable energy consumption initiatives from 30 European countries (EU-28, Switzerland and Norway), made available in a comprehensive European database of energy initiatives involving households, and a subsequent development of typologies of sustainable energy consumption initiatives. This extensive synthesising work guides several phases of ENERGISE, as well as contributes to future energy consumption research, policy and practice.

This is done by

- Constructing innovative typologies of sustainable energy consumption initiatives that can inform further research and action.
- Identifying key success factors and related indicators, focusing on individual-level, collective, organisational, institutional and societal aspects of energy consumption, which inform WP3 (Designing Living Labs), WP4 (ENERGISE Living Labs) and WP5 (Capturing Energy Cultures).

- Making progress towards the goals of the European Union's Energy Union by creating a publicly archived open access dataset of sustainable energy initiatives across 30 countries in Europe.

1.2 SUSTAINABLE ENERGY CONSUMPTION INITIATIVES (SECIS)

In ENERGISE, 'sustainable energy consumption initiatives' (SECIs) are defined as activities that deal with reducing energy related CO_2 emissions from households. This can either be in terms of

1) reducing the actual energy consumption,
2) reducing the emissions intensity of energy consumption (e.g. by substituting fossil fuels with renewable energy sources).

The SECIs included in the database generally feature an element of *active involvement of households*. This is due to the fact that the data collected has to inspire the development of Living Lab approaches involving households. The definition of a SECI is intentionally kept broad in order to make room for empirical enquiry, such as a large variety in empirical examples seeking to achieve the same goals. However, a few guidelines have been developed in order to identify what a SECI *cannot* be as well as what a SECI *can* be.

SECIs collected by the ENERGISE project partners *are not* initiatives that solely deal with reductions in energy demand or carbon emissions within companies or at the energy suppliers themselves, even if those initiatives contribute to reductions in energy use within households as a result of buying the products or services (e.g. oil, gas, electricity, food, ICT etc.). Initiatives led by companies or energy suppliers that actively target and mobilize households may, however, be included.

SECIs collected by ENERGISE *can* include households as actors in a number of different ways. The households may be viewed as consumers (by buying products and services); prosumers (for instance by (co-)producing renewable energy); innovators (by using products in innovative ways creating other/new kinds of energy demand), and/or they can be viewed as active participants in various groups relating to sustainable energy consumption (e.g. Facebook groups or NGOs). Households may also be investors in sustainable consumption initiatives and renewable energy schemes. Households play different roles depending on the different practices they engage in, and a number of different roles may be relevant for ENERGISE. Examples of these roles are to what extent and how participants of households (or households as entities) reproduce certain practices such as heating, cooking or showering. If there are variations in these practices, it is relevant for ENERGISE to capture these variations. Equally, for the general aims of the ENERGISE project, the differences between individual and collective aspects of initiatives are particularly important. In looking for examples of collective agency in SECIs, initiatives that have been promoted as part of a spatial community or a community of interest have been of importance.

2 CONSTRUCTION OF OPEN ACCESS DATASET OF SECIs

The construction of the Open Access Dataset has been carried out in collaboration between WP2 and WP7 of ENERGISE.

The Open Access Database is constructed in such a way that it includes information from the database of 1000+ SECIs (for full list of SECIs see Jensen et al. 2017a). More specifically, the Open Access Dataset provides information on each SECI documented in the ENERGISE database including 1) name, 2) short description and 3) the objectives of the SECI. Further, each SECI is categorised according to the Problem Framing Typology developed in ENERGISE D2.4 (Jensen et al 2017b). Icons representing the categories of the typology are featured next to the SECIs and correspond to the category to which the SECI has been allocated. The theoretical and methodological foundation through which the SECIs have been analysed according to the typology is presented in Jensen et al (2017b).

The Open Access Dataset is searchable in such a way that the user can filter the SECIs according to 1) Scale, and 2) the Problem Framing (PFT). For a visual example of the Open Access Dataset, what data is featured and how, see Figure 1.

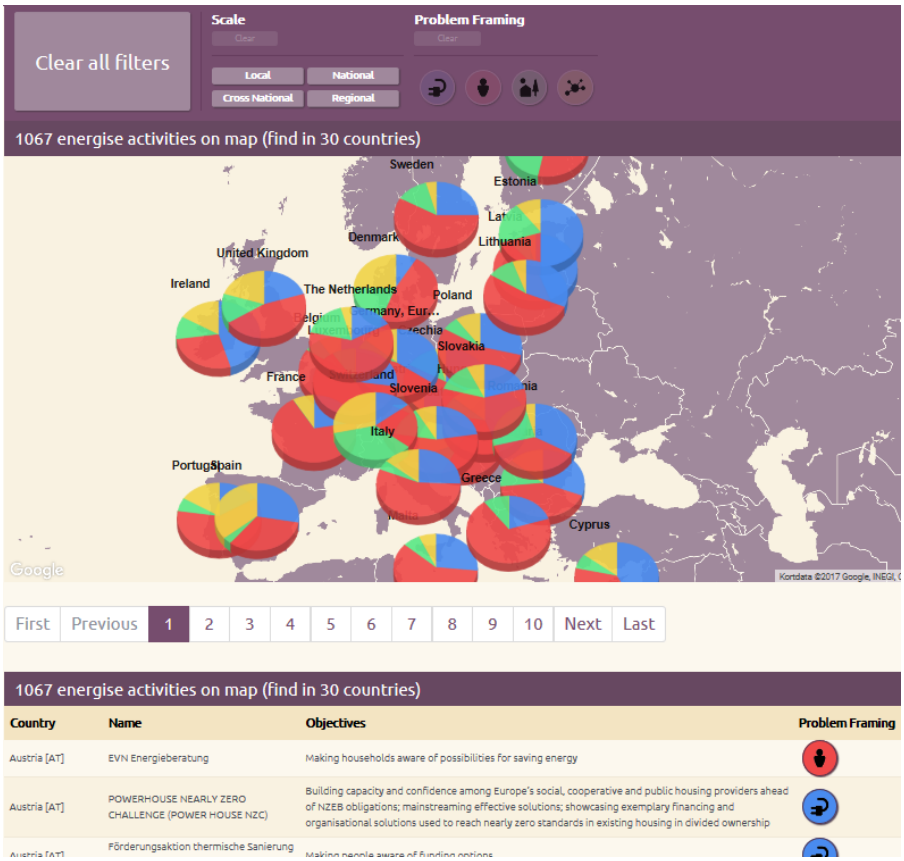


Figure 1 Overview of ENERGISE Open Access Dataset of SECIs

The following section presents the intended use and purpose of the Open Access Dataset.

3 USE AND PURPOSE OF OPEN ACCESS DATASET OF SECIs

The ENERGISE Open Access Dataset displays over 1000 Sustainable Energy Consumption Initiatives (SECIs) that corresponds to the ENERGISE definition of household oriented sustainable energy consumption initiatives (see Section 1 for details). The map in the dataset shows the national origin of the SECIs and the user can explore the content and objectives of each SECI by clicking on individual countries. Filters have also been provided so that the user can search by scale and problem framing.

3.1 THE PURPOSE OF THE ENERGISE OPEN ACCESS SECI MAP

The map is designed to be a user-friendly device that provides an overview of sustainable energy consumption initiatives (SECIs) in Europe. In particular, the map shows the variety in scope, content and approach in the identified SECIs. The map is not exhaustive, but it is representative for the purposes of the database. We envisage the map to be a resource for a wide range of people, as it:

- Provides a systematic overview of the myriad energy consumption initiatives across Europe.

- Provides insights into predominant ways in which energy consumption challenges are framed (*problem framings*), including the way in which change is expected to happen. The map distinguishes between four different problem framings for sustainable energy consumption initiatives. These are:
  - Changes in technologies
  - Changes in individuals' behaviour
  - Changes in everyday life situations
  - Changes in complex interactions

  (The conceptual definitions of these categories are described in detail in ENERGISE D2.4 (Jensen et al 2017b)).

- Provides a tool for researchers and policy makers (as well as for WP6 in ENERGISE) who are interested in exploring sustainable energy consumption initiatives, and the ways in which they deal with sustainability challenges related to household energy consumption.

- Showcases how SECIs are (or are not) taking into consideration a broad range of individual, social and material aspects when addressing sustainability challenges related to household energy consumption.

- Disseminates examples of how SECIs can be framed when taking into consideration a broader range of social, cultural, material and institutional aspects of change related to household energy consumption.

Note: The database provides descriptive information about content and scale of the SECIs as well as analytical information about the type of the SECIs according to the ENERGISE Problem Framing Typology. The dataset therefore does NOT represent an evaluation of the merits or otherwise of any particular SECI.

3.2. HOW TO USE THE ENERGISE OPEN ACCESS SECI DATASET

There are a number of ways for the user to interact with the dataset and find out what is going on in the 30 European countries.

3.2.1 EXPLORING THE MAP

A simple way to use the dataset is to explore the map shown on the landing page. The SECIs of each of the 30 countries we have researched are represented by a circle that shows the configuration of the *categorised* types of SECIs identified in the country. By hovering the cursor over a circle, the user can see what country the circle represents and, if filters have been applied, the SECIs that match the search. If the user has not used a filter, the total number of identified SECIs for that country will be shown.

In the example in figure 2, the selected country is Denmark, and 36 identified SECIs are shown. If you click on the country name, a list of the results for the selected country appears. This list is shown below the map and the user can scroll down to learn more about each SECI.

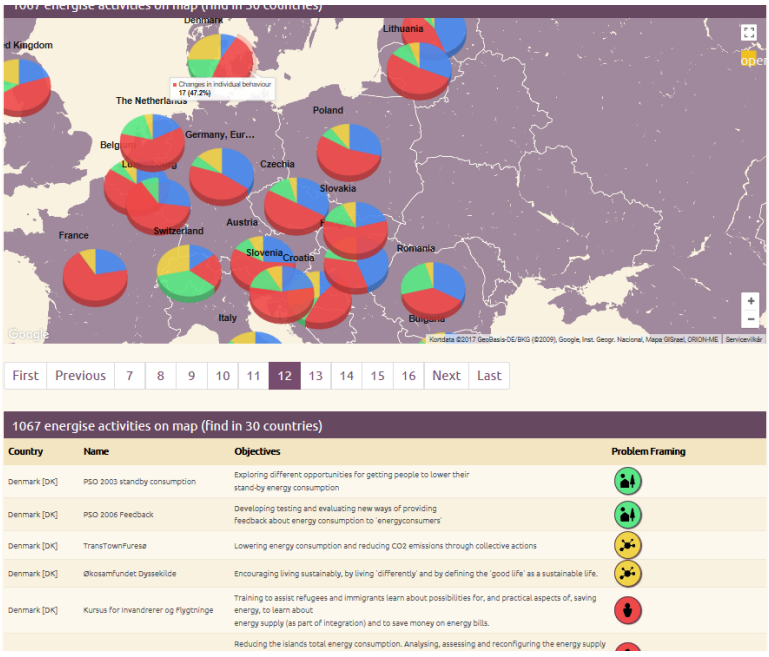


Figure 2 Open Access Database - selecting by country

3.2.2 USING THE SCROLL FUNCTION

When the user has scrolled down, a list of SECIs within the selected country is shown. If the user scrolls down below the map without first choosing a country, a full list of all identified 1000+ SECIs will be shown. By pressing/hovering over the Name of the SECI, a short description of the SECI will appear. Next to the Name, the Objectives of the SECI are featured. On the right hand side of the list, icons indicate under which category each SECI has been listed according to the Problem Framing Typology.

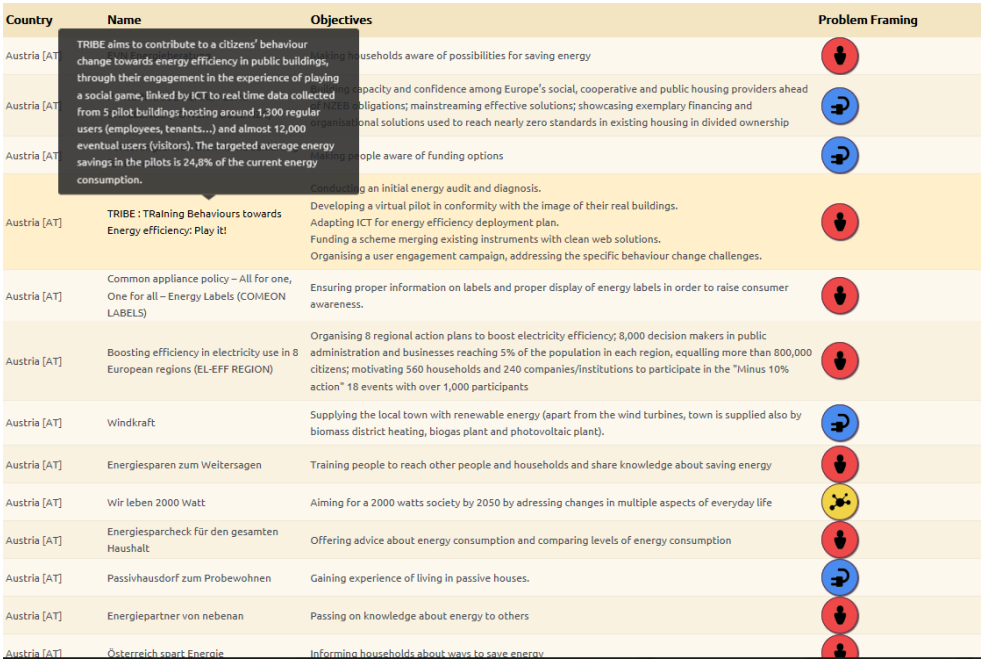


Figure 3 Open Access Database - Scrolling List of SECIs

If the user wants to learn more about a SECI, the user can click the link embedded in the description and s/he will be redirected to the SECIs homepage.

3.2.3 USING THE SEARCH BARS

In addition to exploring the database via the map, the user can also use the search bars to find particular types of SECIs related to their Problem Framings or the user can search for SECIs that are carried out at different scales.

In the following, a few examples on how to navigate the search bars are given:

- If the user is interested in exploring SECIs that target everyday life situations when opting for sustainable energy consumption, s/he can filter by **Changes in Everyday Life Situations** in **Problem Framings.**
- If the user is interested in exploring SECIs that are carried out at a local scale, and which target everyday life situations when opting for sustainable energy

consumption, s/he can filter **Local** in **Scale** *and* **Changes in Everyday Life Situations** in **Problem Framings**.

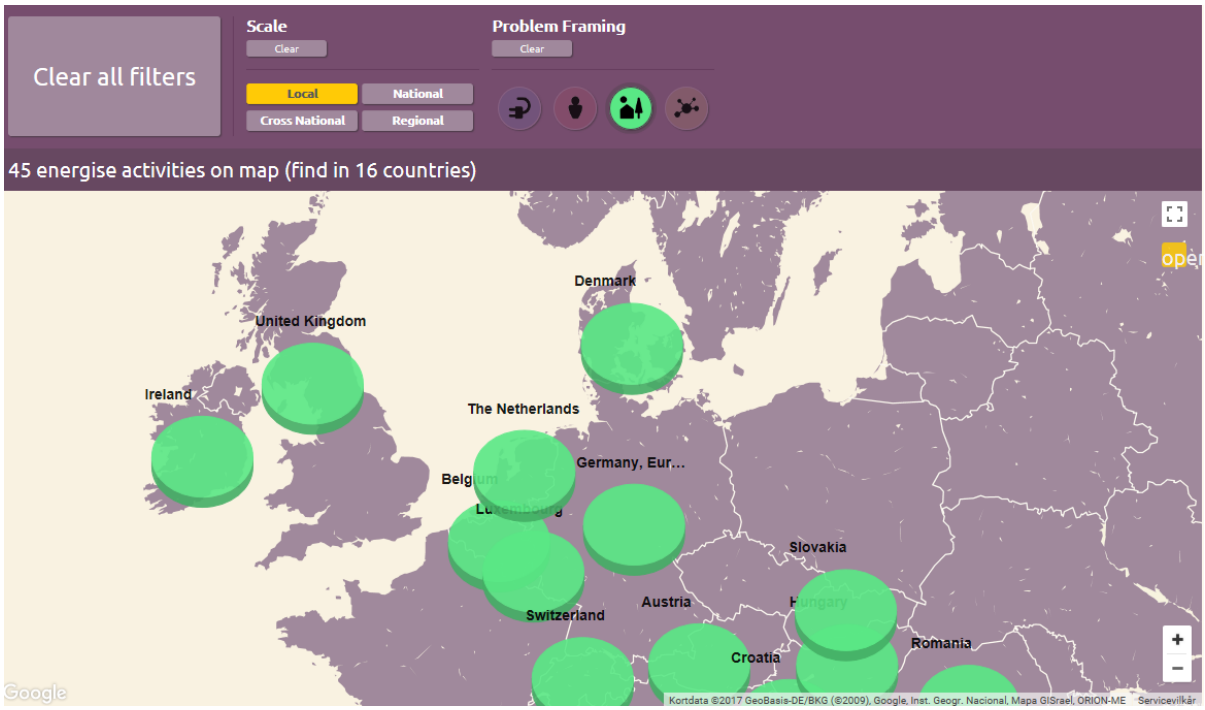


Figure 4 Open Access Database - example of using filters

3.2.3.1 THE LEGEND

Hovering above the icons in the table below the map will bring up boxes that explain our definitions of categories of the Problem Framing Typology.

4 DISCLAIMER

The ENERGISE Open Access Dataset is an attempt to systematically map European SECIs. As part of our work with developing such a dataset, we have had to make some decisions about what to include in the dataset and how to categorise and classify the SECIs that are various in scope, size and content. The methodology and scope of collecting data on European SECIs is presented in ENERGISE D2.2 (Jensen 2017) and the theoretical and methodological steps taken in analysing, classifying and categorising the SECIs can be found in ENERGISE D2.4 (Jensen et al 207b). Although the ENERGISE Team represents a number of European countries, and language skills related to and knowledge about researching European SECIs have been ensured, we acknowledge that some SECIs might also have been missed during our delimited search and some SECIs might be misrepresented by our classification and categorisation of the SECIs. We therefore welcome feedback and suggestions for updates, and we have included a feature to allow users to submit questions and suggestions directly through the dataset webpage. We aim to update the ENERGISE Open Access Dataset once a year until year 2020.

The main function of the ENERGISE Open Access Dataset is to 1) display 1000+ SECIs that actively involves households in change processes, as well as to) 2 display ENERGISE' typological categorisation of the SECIs. The ENERGISE Open Access Dataset does not represent an evaluation of the merits or otherwise of any particular SECI. Further, please note that inclusion of SECIs in the map is not an endorsement by the ENERGISE project or its partners.

ACKNOWLEDGEMENT

The ENERGISE Project Partners would like to thank VM-PL for their professional work with developing the digital platform for the ENERGISE Open Access Database. Further we would like to thank colleagues from ShareCity for helpful feedback on the process of developing an open access database.

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