



EnerMaps:

The New Open Energy Data Management Tool That Empowers Decision Makers Through Knowledge

Background

Sensible policy making requires reliable data, and the transition to sustainable energy systems a profound understanding of the supply and demand of energy. The EnerMaps Data Management Tool (EDMT) will allow policy makers to easily gain such an understanding through facilitating the transfer of knowledge. The EDMT will provide crucial high-quality energy data that is easily accessible and visualizable. It will therefore represent a reliable knowledge base for public administration officers and others. The EDMT enables them to provide requested insights and to support decision-makers effectively.

Despite the creation of large scientific data repositories, high quality energy data is often still difficult to find. Furthermore, data remains mixed and distributed over different repositories. Long time can be lost with searching and combining data from different sources. Ultimately, inaccessible and fragmented energy data results in a lack of efficiency for energy policy making and management, such as, for example, higher costs, slower progress and more difficult replication.

The EDMT will address this challenge. The EDMT is a tool fed by a curated European-wide open-access energy database. It displays energy data from 50 harmonized datasets that are essential for policy makers in Europe and parties involved in the policy cycle. The data has been selected by experts, has undergone a rigid quality-check process and is legally consultable. The tool will provide easy access to these energy data and related insights, as well as the possibility to visualise the data within a story map and to manipulate it.

Therefore, the EDMT will be indirectly valuable to policy makers through accelerating the transfer of knowledge and decision making. Policy makers will not be drowned with unnecessary or unreliable information. Instead, public administration officers as well as others involved in the policy cycle, such as researchers, consultants, managers, energy planners or social innovation experts, will be able to provide policy makers with the information they really need. **Furthermore, the EDMT will help bridge the gap between research and policy practice and support informed decision making.** The EDMT will not only make it easy to visualize spatial open energy data and access scientific findings. It will also give visibility to them. In this way, data and findings do not disappear but knowledge remains accessible to public administration and creates real impact.



Key Messages

1. THE EDMT WILL BE VALUABLE TO POLICY MAKERS AT ALL STAGES OF THE POLICY CYCLE

a. Target setting:

The EDMT allows policy makers to formulate realistic objectives and to compare targets before important decisions are made.

Setting an agenda, identifying and deciding on targets, formulating short- or long-term policies - all that requires easy access to high-quality energy data and insights. For example, overly optimistic target-setting is a frequent source of policy failure¹.

- Through the EDMT, public administration officers will consult policy makers with **quality-checked, context-specific energy data**. The tool will facilitate problem-recognition and will offer the ideal basis for informed decisions and the formulation of long-term innovation plans.
- The user-friendly graphical interface of EDMT consents the public administration to **rapidly visualize essential energy data and targets for policy makers**.

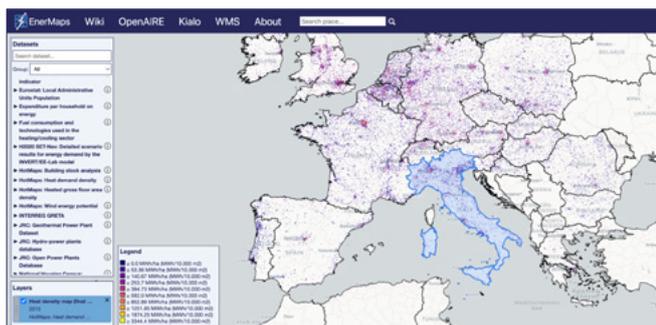
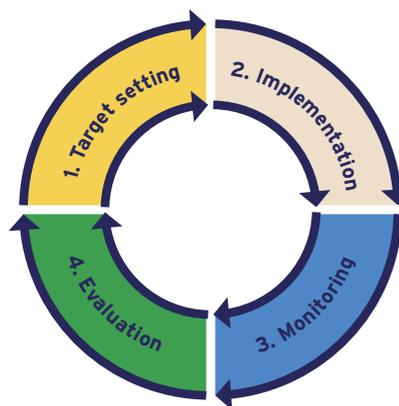


Figure 1: Users of EDMT's story map can make selections and calculations directly on the map. (screenshot taken from EnerMaps 2021: https://lab.idiap.ch/enermaps/?shared_id=hotmaps_heat_tot_curr_density)



b. Implementation:

The EDMT will help policy makers to foster political support for their targets. Opposition from affected incumbents or a misleading perception of costs as merely damaging frequently impede the successful implementation of policies². The EDMT equips policy makers with persuasive power:

- The EDMT gives access to 50 quality checked datasets and therefore supports a needed **integrated approach to policy making** that considers the broader policy strategy and various targets. Thus, EDMT facilitates addressing the interests of affected stakeholders.
- The **open access**-nature of EDMT allows all parties to easily dismantle their concerns and makes policies based on EDMT persuasive.

1 Hudson, Bob, David Hunter, and Stephen Peckham. 2019. "Policy Failure and the Policy-Implementation Gap: Can Policy Support Programs Help?" Policy Design and Practice 2 (1): 1-14. <https://doi.org/10.1080/25741292.2018.1540378>.

2 Gürtler, Konrad, Rafael Postpischil, and Rainer Quitzow. 2019. "The Dismantling of Renewable Energy Policies: The Cases of Spain and the Czech Republic." Energy Policy 133: 110881. <https://doi.org/https://doi.org/10.1016/j.enpol.2019.110881>.

c. Monitoring:

The EDMT permits to adapt and monitor policies and targets in an informed and timely manner and to formulate feedback quickly.

This is particularly important as successful energy policies require sufficient flexibility. To withstand changes in market conditions and technological progress, policies must allow for unexpected and **quick up- or down-scaling and control over the development and distribution of costs**³. Through easy access to up-to-date energy data, the EDMT consents public administration officers to provide policy makers with the ideal basis to do so.

d. Evaluation:

The EDMT will contribute to an accurate evaluation of the benefits and costs of energy policies.

- Through the EDMT visualization tools, **comprehensive assessments** of impacts, processes, and outputs on a **local and context-specific level** will be easily accessible for public administration officers and non-expert users.
- Evaluations can be carried out promptly, which ultimately enables cost-effectiveness and energy savings.

2. THE EDMT SHOULD BE USED BY POLICY MAKERS AT DIFFERENT LEVELS TO INFORM AND JUSTIFY DIVERSE POLICY MEASURES



The EDMT should be used to justify and inform policy measures. Binding regulations, such as minimum energy standards, or **economic measures**, such as targeted taxes, subsidies or grants, require a detailed justification. EDMT can be supportive in providing such a justification. It will be based on quality-checked and accurate data and a careful balance between objectives. **The EDMT can also be used for policy measures that rely on informing citizens, such as campaigns.** Through its visualization tools of essential data that do not require expert knowledge, EDMT can contribute to effectively reaching citizens and different target groups of policies

This EDMT will be indirectly valuable for policy makers at a local, regional, national and European level. The EDMT will enable parties who have a say or stake at different stages of the policy cycle to address policy makers effectively. Advice and demand of action will be based on scientific knowledge and data.

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³ Gürtler, Konrad, Rafael Postpischil, and Rainer Quitzow. 2019. "The Dismantling of Renewable Energy Policies: The Cases of Spain and the Czech Republic." *Energy Policy* 133: 110881. <https://doi.org/https://doi.org/10.1016/j.enpol.2019.110881>.

