Stakeholder engagement and dissemination of modelling insights using web-based learning simulations and open databases

Objectives

Main Objectives

Sharing modelling insights and modelling results with people outside the project team is both important and very complicated. While the main target group are policy makers, the stakeholder engagement process reaches out to other players to widen the participation and support the science-policy dialogue. These include EU & Government bodies, economic actors, other research institutes and civil society representatives. The preparation of large amounts of data and the simplification of causal relationships in complex models and model chains is a great challenge. In addition to the consideration of different levels of knowledge, legal aspects (copyright) must be observed.

Project Objectives

REEEM AIMS to gain a clear and comprehensive understanding of the system-wide implications of energy strategies in support of transitions to a competitive low-carbon EU energy society, given the objectives and framework outlined in the Strategic Energy Technology Plan. The provisions of the energy services in this society will be defined by their sustainability, affordability, efficiency, energy security and reliability.

Related Project

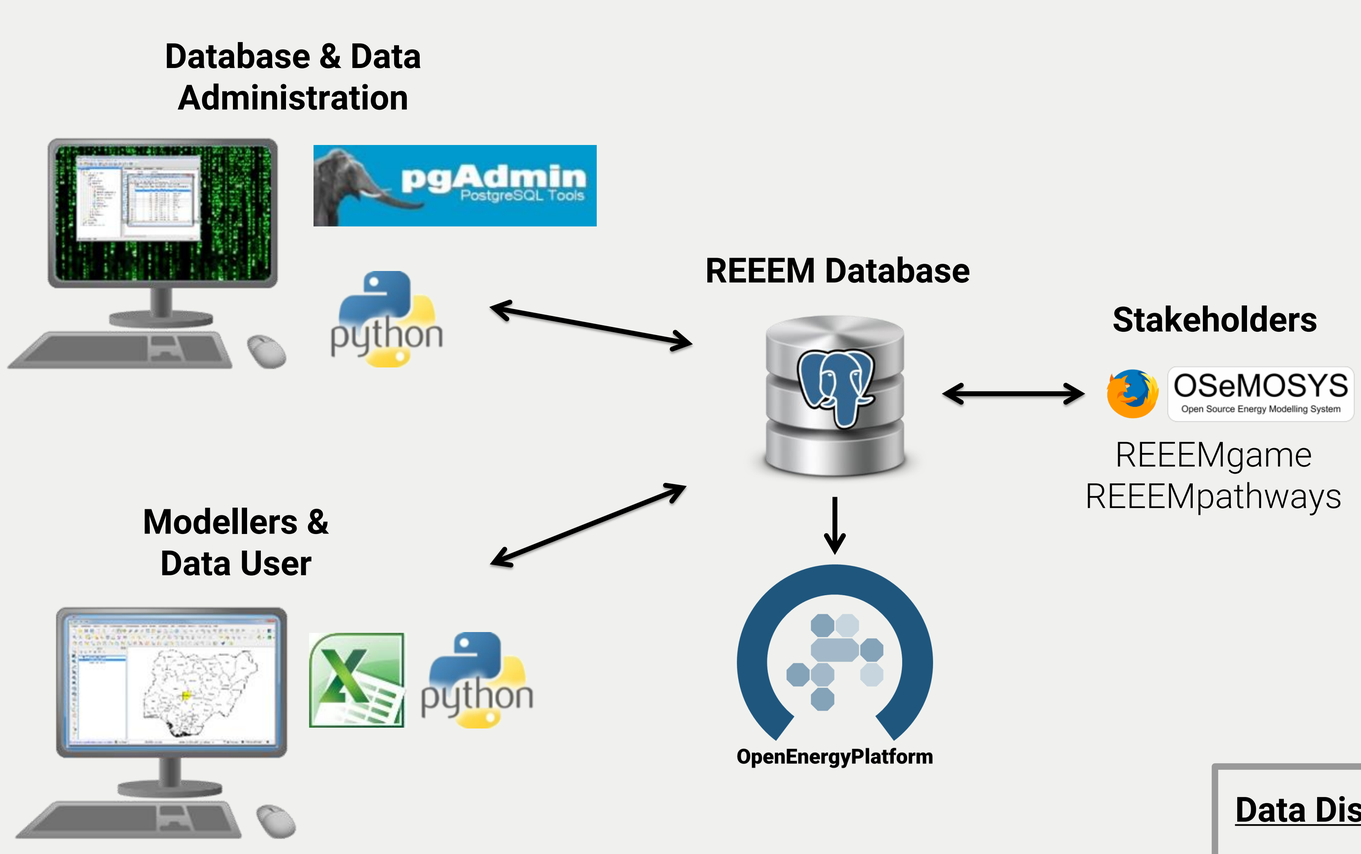
Role of technologies in an energy efficient economy – model based analysis policy measures and transformation pathways to a sustainable energy system

REEEM Database

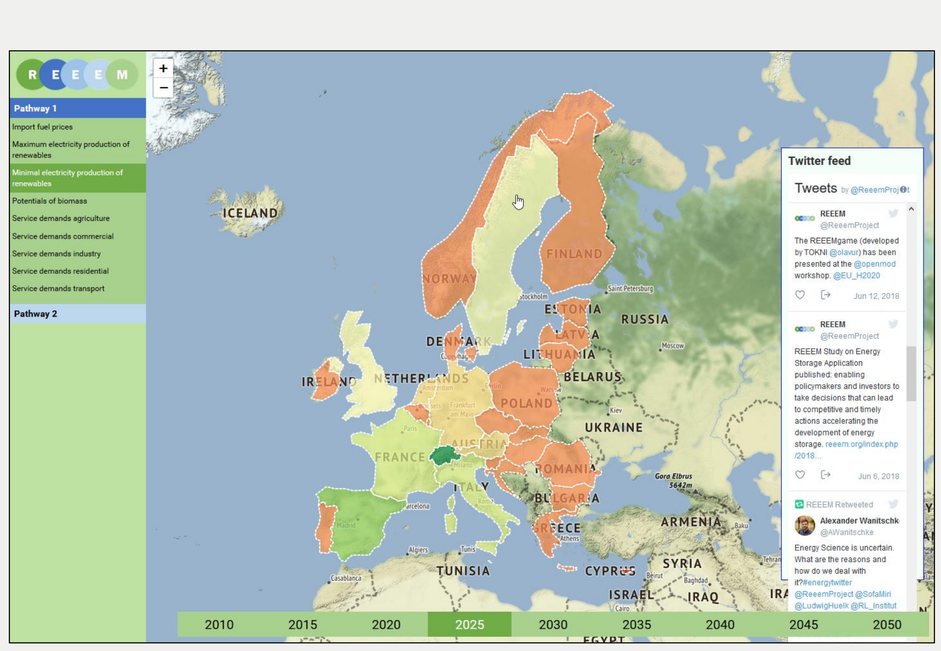
Modelling data (input and output data tables) is stored in an internal project database with (PostgreSQL) hosted by one of the project partners. An advanced user management with different roles (administration, modellers, and stakeholders) has been implemented.
Within the database, data is made interoperable in a normalized form. Accompanying metadata is gathered in a human and machine readable JSON format. This metadata set follows the requirements of established metadata standards (e.g., frictionless data, Dublin Core, DCAT-AP). Data licensed with an open license is published on the OpenEnergyPlatform and can be used by other modellers and stakeholders.

Stakeholders

The project aims to reach and involve a broad group of stakeholders. Equally important and difficult to reach are **EU & Government bodies**. A large and very heterogeneous group are the **economic actors** who develop, produce or deploy technologies and services. In addition, different research communities and other **research institutes** as well as **civil society representatives** are to be addressed. Within these groups, there is a wide range of existing knowledge, interest and motivation.



REEEM data management and dissemination © RLI | CC BY 4.0



Screenshot REEEMpathways © TOKNI | CC BY 4.0

Data Access

There are different technical possibilities to access the project database. The default access method is via a **DBMS (pgAdmin)**. This method is necessary for administration and advanced modellers.

In order to allow data access to partners without database experience different so called **database adapters** have been created. These python scripts can be used to upload data from different data structures in an automated process. Additional Jupyter Notepad can be used for **database views**, data visualizations, and data export. Users and stakeholders can also use the developed web application **REEEMpathways** to visualize data on a map and graphs.

Data Dissemination

The purpose of the Energy System Learning Simulation called **REEEMgame** is to learn about energy systems. Participants will learn how different decisions affect the energy systems and the outcomes for other stakeholders. It is open source and a link to the repository is provided below. Participants will learn how different decisions affect the energy systems and the outcomes for other stakeholders.
The repository is where technically advanced stakeholders can get instructions and all necessary source files to install the game on their own computers, make amendments and new game models in local or forked versions of the source code. In addition, a link to a demo version of the REEEMgame is available.

Through to the pathways dialogue tool **REEEMpathways** the user can explore assumptions and input data of the different pathways calculated in REEEM. Experts can discuss single assumption with the REEEM partners through to the tool. The REEEMpathways also serves as Input and output management for the OSeMOSYS open source EU Model named OSEMBE and allows users to develop their own pathways. Visit the interface at **https://pathways.reeem.org**

Acknowledgment

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 691739. This publication reflects only the views of its authors, and the European Commission cannot be held responsible for its content.

Contact & Copyright

Visit the REEEM project
http://www.reeem.org/

Meet the developers
https://github.com/ReeemProject

Authors: Ludwig Hülk (RLI), Ólavur Ellefsen (TOKNI), Berit Müller (RLI), Bo Lærke Hansen (TOKNI)

Contact mail: Ludwig.Huelk@rl-institut.de

Please cite as: "Stakeholder engagement and dissemination of modelling insights" © Reiner Lemoine Institut | CC BY 4.0