



## FG5: Infrastructure for integrating open-source models across spatial and sectoral scales to facilitate open science and transparency

Focus Group 5 started with introductory presentations by the four convening consortia: OpenEnergyPlatform, SENTINEL, Spine, and openENTRANCE. Each team highlighted complementary aspects of their ongoing work: data models, ontologies, workflows, visualization, and different database frameworks all geared for high-powered energy system scenario analysis.

The group then split into two break-out groups to discuss potential areas of collaboration across the four consortia and the wider community participating at EMP-E. The insights from the break-out groups can be summarized as follows:

- 1) Given the breadth of domains & use cases for energy systems modelling in the context of the European Green Deal and related decarbonization targets, parallel and complementary data models will be required to support all relevant research questions.
- 2) Even implementations of the same high-level standards like the „frictionless data package“ can lead to incompatible data formats.
- 3) There is limited scope of harmonization for the data processing workflow from raw source data to a usable model input, but the participants identified substantial potential for collaboration on visualization and processing of results.

The participants agreed that the main challenge going forward is to not repeat the „curse of a thousand parallel solutions“ which happened in the open-source modelling community over the past decade. Instead, the community must work harder to identify synergies and build on (or compatible to) existing data formats, standards, and tools.

