

14th September 2022: The Pre-workshop Training Camp [optional!]

The NextGenEC organising team would like to invite interested participants to a half-day interactive introduction to various python-based tools and methods used within energy and/or climate modelling. These sessions will be a mixture of short lectures and then practical examples on the topics below, which we believe to be critical skills for tackling the next generation of challenges in energy and climate modelling. In each case, you will have the opportunity to ask questions to the experts and practical support in completing the modelling exercises.

To help ensure we have enough spaces to support all participants, we are limiting our registration to 20 participants. To apply for a place, please indicate you wish to attend the training camp on the main workshop registration form and submit your registration **before Wednesday 1st September 2022**:

- <https://forms.office.com/r/f6A4kF7Pwb>

Participants will be informed of their place by email. As spaces are limited, we request that you only register if you intend to fully commit to attending the training camp and that you are satisfied that you are able to meet the following pre-requisites:

- Knowledge of python or a very good knowledge of other similar languages and a willingness to learn.
- Access to a standard Google account **or** a local python environment where you can clone the NextGenEC code repository [details will be sent to participants when they are notified of having a place on the course]

Prospective participants may wish to take a look at this [list of introductory materials](#) prior to attending.

Programme:

1300 – Welcome

1310-1500 – Session 1: Weather and Climate: In this session, the basic concepts of weather and climate modelling will be introduced through a brief lecture. You then have the opportunity to explore how to work with state-of-the-art gridded climate datasets (e.g., loading files, manipulating data and translating into energy-relevant variables). In this session we will focus on using the ERA5 reanalysis.

1500-1515 - Break

1515-1645 – Session 2: Energy: In this session, you will learn about the fundamentals of power system modelling. Following a brief lecture, you will be explore how the weather-dependent “energy” time series developed in session 1 can be used to perform analysis experiments in an leading open-source energy system model. In this session we will focus on PyPSA (Python Power System Analysis).

1645 – Plenary gathering: Q&A with energy/meteorology experts.

1700 – close