

European Climatic Energy Mixes (ECEM) Webinar



Climate Change

*Discover the C3S ECEM
energy data for the
European energy sector*

20 November 2017



European Climatic Energy Mixes (ECEM) is a
Copernicus Climate Change Services Project (C3S)
which is developing, in close collaboration with the
energy sector, a demonstrator to assess how well
different energy supply mixes in Europe will meet
demand, over different time horizons, focusing on the
role climate has on the mixes

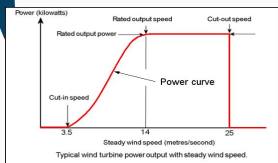


Calibrated Climate Variables

Temperature
Rainfall
River Discharge
Wind Speed
Cloud Cover
Solar Radiation
Others ?

+Ancillary

Define models & transfer functions
Select / Gather relevant datasets



Energy Variables

Hydro Power
Demand
Wind Power
Solar Power
Thermal Power

- Skill & Reliability
- Assessment of Seasonal Forecasts of Energy Variables

+ Extreme Events Case Studies



- Sub-Country Scale
- Historical Period
- Seas. Fcst
- Clim. Proj.

○ Countries ○ Clusters

Time Period: Historical

Variables: Climate 7

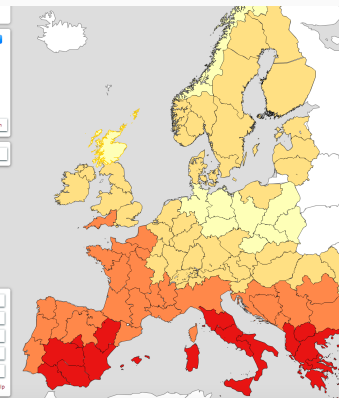
Surface Solar Radi

Temporal Resolution: 1 month

Cluster: 04 United Kingdom

New graph Refresh graph Add to graph

Links On Close Graphs Reset Map



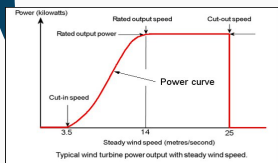
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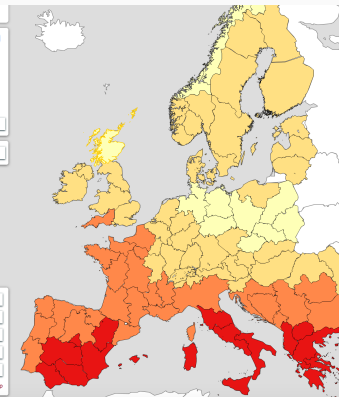
Surface Solar Ratio

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Using the demonstrator

Methods & assumptions

Key messages

Case studies

About Cookies Help





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Agenda – 14:00-15:15 UTC

1. Energy variables for the European domain
Dr Laurent Dubus (EDF R&D, FR)
2. Hydro-power energy modelling for European countries using surface temperature, daily precipitation and snow cover
Dr Matteo De Felice (ENEA, IT)
3. Solar power generation based on a physical model coupled with a statistical distribution of a PV plant model
Dr Yves-Marie Saint-Drenan (MINES ParisTech, FR)
4. Question and answer session

Webinar Chair:
Prof. Alberto Troccoli

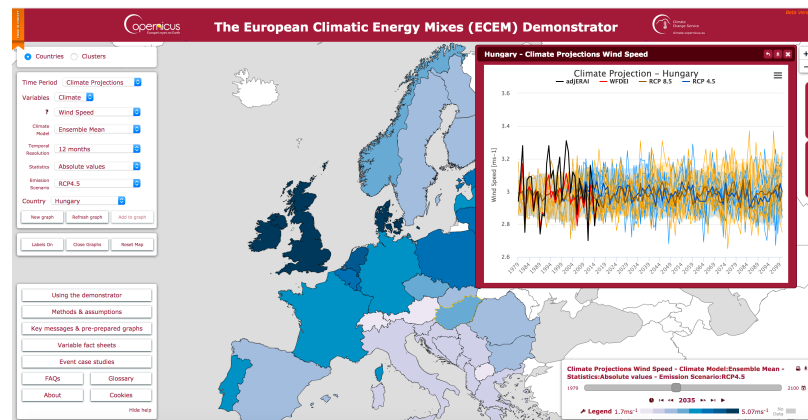




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House Rules

- ★ Three presentations followed by Q&A: please type your questions using the “Questions” tab in the control panel – we will read the questions out at the end
- ★ The webinar is recorded and will be available online
- ★ Enjoy the webinar!





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Your Questions

1. [Laurent] Are the demand models of the different countries available? Where?
2. [Laurent] Why are you interpolating wind data from 10m upwards and not using higher level wind data from the models?
3. [Matteo] France is considered with 100% run-of-river hydroelectricity?
4. What will the new ERA-5 reanalysis bring to these studies?
5. [Matteo] Is there a lag for temperature also? Have you improved the model by adding temperature?
6. Have your results already been used for national or international electricity projections studies?
7. Can we have a demo of the ECEM demonstrator?
Please visit <http://ecem.climate.copernicus.eu>

Thank you for your participation

Upcoming ECEM Webinar:

- ECEM Demonstrator Update, January 2018 (exact date TBA)

ECEM Demo – <http://ecem.climate.copernicus.eu/demo>

For more information, or to provide your feedback, please visit:

ECEM Project: <http://ecem.climate.copernicus.eu>

In collaboration with **World Energy & Meteorology Council (WEMC):**
<http://www.wemcouncil.org>

