



Balmorel Lite Update: New web interface and additional functionalities

In April 2017, the Danish Energy Agency has launched Balmorel Lite, a web based energy model useful to assess the value of renewable energy into different electricity systems. This model has been developed by EA Energy Analyses for the Danish Energy Agency to be used by the partner countries in our GtG cooperation.

The objective of the update of Balmorel Lite is to further develop the model, making the results even more realistic and increasing the usability in countries with different conditions and electrical systems. The Danish Energy Agency is now offering a tool making it possible for the user to choose between three different profiles, representing a local site, a country or a bigger region, which have a direct effect on wind and solar profiles. These additional options make it possible to evaluate the effect of the geographical dispersion of wind and solar resources in various scenarios for increasing the share of renewable energy.

In addition, the new set of features allows the model to make optimal investments in different power production technologies. It is also possible to simulate a closer to reality operation of the power plants by enabling the unit commitment, where the optimization takes into account the cost to start-up a unit and a minimum production level, and by enhancing the flexibility of power plants where their minimum production level is reduced especially in periods with higher RE generation. Finally, it is now possible to set the minimum level of capacity factors for dispatchable technologies in the simulations.

Balmorel Lite can perform quick analyses of power systems along with testing the economic feasibility of additional investments in renewable energy capacity. The model has a high speed calculation time and the solving time may vary depending on the settings. However, it has a time limit of two

minutes, where the best found solution will be returned.

The model can be accessed and used without a charge through the webpage www.balmorellite.dk.

About Balmorel Lite:

- Balmorel Lite is a simplified version of the energy model Balmorel, which is used for scenario analysis in many countries. However, only the electricity sector is represented in Balmorel Lite version.
- Balmorel Lite simulates the hourly load distribution on power plants based on their short run marginal costs within a year.
- Balmorel Lite is provided by the Danish Energy Agency with the purpose of supporting an environmentally sustainable development in emerging economies using Danish experiences with low carbon technologies and systems.

Read more about [Balmorel Lite here](#).

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