ELECTRICITY MAPS

Copenhagen, 22nd of January 2024

At Electricity Maps we aim to provide granular information about the electricity generation continuously, meaning that data is complete 100% of the time. The data we receive from various sources (TSOs, energy utilities, etc.) is occasionally unavailable due to delays and outages from the data providers. In these cases, we estimate data using different models.

When data is missing for a short period of time, we rely on the Time Slicer Average (TSA) estimation model that we developed internally. This estimation method uses available historical data to fill in the gaps. Each missing point is filled by the average of the available data points that belong to the same time period but on different days in the given month. More information can be found here.

Our TSA approach operates with the highest accuracy for short and bounded periods of missing data. Estimating real-time data using this methodology has proven difficult as it doesn't consider weather parameters which greatly impact the power production mix.

Last weekend the data for Germany was missing on the provider side for a prolonged period, forcing a longer than average timespan during which the data was estimated. Simultaneously, wind speeds surged dramatically and this change was not captured by our estimations. This created a short period in which carbon intensity for Germany was inaccurate.

In an effort to provide a better user experience, we are working on the following short-term changes that will be rolled out this week:

- We will improve communication around estimated data on the app. We are also increasing transparency around how the models work, when they are implemented and what are their limitations. Further information can be found on our methodology page.
- We will increase the delay of the data shown on the app to rely less on real-time estimations.
- We will be more reactive and hide data from the app when there are prolonged data outages from the data providers.

We will continue to dedicate resources to improving our estimation models to better capture the variability of power production in real-time. We collect feedback continuously and you can find our feedback form here.