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New optimisation algorithm helps assess impact of emergencies on smart grids



Cover image

A new algorithm has been developed to maximise the autonomy of smart grids under emergency conditions. It prioritises renewable energy sources (RES) and utilises artificial neural networks which provide forecast related to intermittent RES production.

Behind this development is Greece's Centre for Research and Technology (CERTH) working as part of the EU-funded microgrid project TIGON. The authors have produced a paper on the subject, titled: Assessment of smart grid operation under emergency situations. The preprint version is available on the TIGON website [here](#). For subscribers to the publication Energy, Elsevier, an extended final version of the article is available [here](#).

The results of the research suggest that an emergency affecting a smart grid's RES at noon might cut the grid's autonomy by 46% and an emergency affecting the storage might cause curtailments of up to 25% in RES production.



Agro2Circular project has received funding from the European Union's Horizon 2020 research and Innovation programme under grant agreement N°887070

Photo credit: Pixabay on Pexels

Background

TIGON is funded by the EU's Horizon 2020 Research and Innovation programme and has a budget of roughly €7m. It forms part of the EU's broader policy of building a low-carbon, climate-resilient future.

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