



OPEN

Retraction Note: Optimal scheduling of integrated energy system based on improved grey wolf optimization algorithm

Jun Du, Zongnan Zhang, Menghan Li, Jing Guo & Kongge Zhu

Retraction of: *Scientific Reports*, <https://doi.org/10.1038/s41598-022-10958-7>, published online 02 May 2022

The Authors have retracted this Article.

Following the publication of the Article, the authors have identified a number of errors which invalidate the results reports in this paper. First, in “Case studies”, subheading “Basic data”, for the simulation the output data shown in Figure 2 were used as input. Since these are not real data, the results of the simulation are incorrect. Second, in “Methods: solving an integrated demand response IES optimization dispatch model for electricity and heat”, in the description of the application of the IGWO to the IES scheduling optimisation, in Step 4 the Authors incorrectly used the FCM clustering algorithm, which is not an appropriate solution. This makes the whole process incorrect. Finally, in “Integrated demand response model for electric and thermal multiple loads” the Authors did not consider the real-time capacity variation which makes the mathematical model incorrect.

All Authors agree with the retraction and its wording.



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2023