

Correction

Correction: Jasim et al. Optimized Sizing of Energy Management System for Off-Grid Hybrid Solar/Wind/Battery/Biogasifier/Diesel Microgrid System. *Mathematics* 2023, 11, 1248

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Error in Figure and Legend

In the original publication [1], there was a mistake in Figure 1 as published (“1250” should be “1900” and “Blue 400” should be “252”). Ref. [53] has now been inserted at the legend. The corrected Figure 1 appears below.

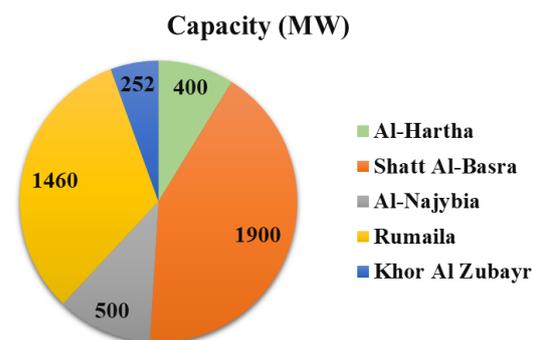


Figure 1. Basra conventional power plants [53].

Text Correction and Missing Citation

(1) There were some errors and omissions in Section 2 (Problem Statement) in the original publication. In paragraph 1, the mistake “radioactive”, should be “CO₂ emissions”. This paragraph is related to paragraph 2, which includes the incorrect reference number “[7]”. Also, there is a mistake in writing cost numbers in paragraph 2 because they are based on Table 2, which is for the year 2020 in its original reference and does not give details such as the used type of fuel, along with a doubt about suitability. Thus, it is necessary to clarify the confusion in understanding this section by rephrasing paragraph 1 and paragraph 2, and to clarify that the paper does not study the power stations of Basra city, their associated costs, or any other data, and uses only the city’s load profile in 2022 to meet it by simulating suggested off-grid MG using MATLAB-based optimal management.

In the original publication [1], ref. [53] was not cited. The citation has now been inserted in Section 2 (Problem Statement), paragraph 1.

A correction has been made to Section 2 (Problem Statement), paragraph 1 and paragraph 2:

The CORRECTED paragraph 1:

Basra’s power system is centralized and relies on five stations, one of which is thermal, and the others are natural gas, as shown in Figure 1 [53]. It participates in and is connected to the Iraqi network. Annually, with non-RERs, costs may be paid to cover operating and



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fuel expenses. This causes the network to face a number of challenges. Pollution and CO₂ emissions can be generated from non-renewable stations, which are not adopted here as the paper focuses on simulating suggested RER-based off-grid MG to fulfill the load profile using the MATLAB-based optimal management of adopted energy sources without studying the power stations of the city, their associated costs, or any other data.

The CORRECTED paragraph 2:

According to the fuel and operation costs of gas turbines and thermal power stations in Table 2 [8], the necessary annual cost to fulfill a specific consumption (e.g., the annualized load of the city in 2022) may be costly in terms of fuel and operation costs. This describes that the above stations are connected to the centralized network; they may incur heavy costs and cause CO₂ emissions. To lower costs (which are here based on assumption values), CO₂ emissions, and to eliminate centralized power system issues, it is crucial to install islanded MG using clean, renewable, and sustainable power plants. Moreover, the optimal size configuration for hybrid power plants is an issue that this study aims to address. The main issue is selecting the optimal capacity to reduce system costs while maximizing reliability. However, optimum sizing techniques cannot be carried out until the components to be hybridized have been mathematically modeled.

(2) In the original publication [1], ref. [70] was not cited. The citation has now been inserted at the end of Section 6, and should read as follows:

In this paper, the renewable resources adopted weather inputs according to [70].

The newly added references appear below:

53. Available online: https://en.wikipedia.org/wiki/List_of_power_stations_in_Iraq (accessed on 3 January 2023).
70. Available online: https://re.jrc.ec.europa.eu/pvg_tools/en/# (accessed on 3 January 2023).

With this correction, the order of some references has been adjusted accordingly. The authors state that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

Reference

1. Jasim, A.M.; Jasim, B.H.; Baiceanu, F.-C.; Neagu, B.-C. Optimized Sizing of Energy Management System for Off-Grid Hybrid Solar/Wind/Battery/Biogasifier/Diesel Microgrid System. *Mathematics* **2023**, *11*, 1248. [[CrossRef](#)]

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