

Response to Reviewer 2 Comments

The authors would like to acknowledge the editors and reviewers for reviewing our manuscript. We modified each of the questions raised by the reviewers. These questions have a guiding role in our research and can enhance the quality of the paper. In addition, we also embellished the language, so that the language level of the article can be improved.

Point 1: Firstly there is not much about the justification of the topic in the sustainable development context. Please, explain more, why searching for new solutions in energy forecasting is important, especially from the sustainable development goals perspective. And why your article is suitable for Sustainability journal.

Response 1: Thanks for your excellent comments. Based on your questions, we have modified the content of the article.

First of all, we added relevant content in the introduction part of the article. The revised introduction is as follows:

As the cornerstone of economic development and industrial progress, energy plays an important role. Due to environmental pollution [1-2], instability of clean energy and other reasons, energy prediction has become a very important research content, including energy consumption [3] and energy production [4]. According to data released by the National Energy Bureau, China's energy consumption and production have been on the rise in recent years, but energy consumption tends to be greater than energy production, and China needs to rely on energy imports to maintain the balance between the two. But not all energy has the characteristic of inexhaustible, all countries in the world advocate sustainable development strategy. In this context, energy prediction must be made. Energy forecasting is the advance planning of the future energy market, an important means to maintain the balance between supply and demand in the market, reduce the waste of resources, and provide technical support for the implementation of sustainable development strategy.

Second, for Sustainability journal, we are in the journal's website (<https://www.mdpi.com/journal/sustainability>) for the review and confirm the article belongs to the scope of the target journal. In addition, the journal has published a number of articles on the same topic, which are listed as. Therefore, we believe that this article meets the requirement of Sustainability.

- [1] Jalaee M s, Shakibaei A, GhasemiNejad A, et al. A Novel Computational Intelligence Approach for Coal Consumption Forecasting in Iran[J]. Sustainability, 2021, 13(14): 7612.
- [2] Zhang P, Ma X, She K. Forecasting Japan's Solar Energy Consumption Using a Novel Incomplete Gamma Grey Model[J]. Sustainability, 2019, 11(21): 5921.
- [3] Ma M, Su M, Li S, et al. Predicting Coal Consumption in South Africa Based on Linear (Metabolic Grey Model), Nonlinear (Non-Linear Grey Model), and Combined (Metabolic Grey Model-Autoregressive Integrated Moving Average Model) Models[J]. Sustainability 2018, 10 (7): 2552.

- [4] Zeng B, Zhou M, Zhang J. Forecasting the Energy Consumption of China's Manufacturing Using a Homologous Grey Prediction Model[J]. Sustainability 2017, 9(11): 1975.

Point 2: Why authors searched only literature base of Elsevier when most common is to search Scopus or WoS.?

Response 2: Thank you very much for your excellent advice. Your comments have improved the quality of our articles. According to your opinion, we have modified the content about the number of articles mentioned in the introduction. We choose Web of Science as an example to better reflect the changes in the number of articles related to energy prediction.

In addition, taking Web of Science as an example, we set the theme as "Energy Prediction" to search the literature in recent 10 years. As can be seen from Figure 1, the number of articles on energy forecasting is increasing every year, and most of the growth trends are in an upward state.

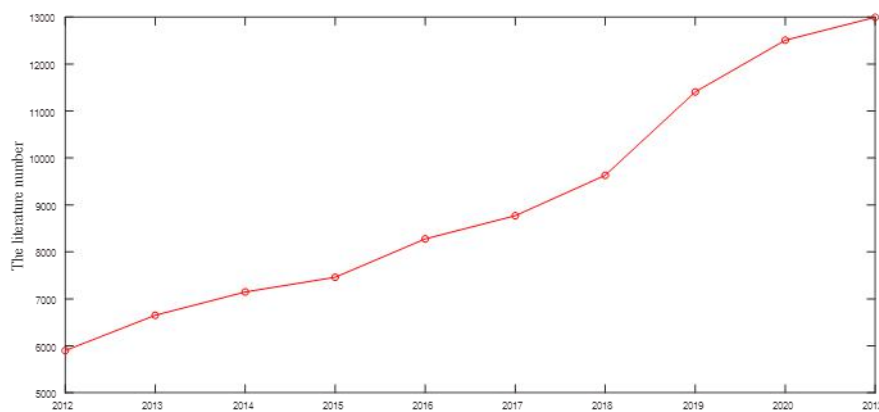


Figure 1. The number of literatures on energy prediction in recent 10 years

Point 3: I have the suggestion to modify the title of the article to "Application of a novel optimized fractional grey Holt-Winters model in energy forecasting", as the "energy forecasting" term is used for price and demand predictions. Otherwise authors should add the "energy demand prediction".

Response 3: Thanks for your advice. According to your suggestion, we have changed the title of the article to "Application of a novel optimized fractional grey Holt-Winters model in energy forecasting". We all agreed that the revised title was better.

Point 4: There are also some unusual phrases in language of the article. It is not common to use "scholars" talking about what is already done in the science. Please don't use "our country".

Response 4: Thank you for reminding me of these shortcomings. In order to solve these shortcomings, we modified these words in the article and restructured the sentences. The changes in the article are marked in red.