

## ***Interactive comment on “Pathways to bring the costs down of floating offshore wind farms in the Atlantic Area” by Juan José Cartelle-Barros et al.***

**Anonymous Referee #1**

Received and published: 23 March 2020

In the manuscript, the authors use the model presented in Castro-Santos and Diaz-Casas, (2014) to analyze the Net Present Value, the Internal Rate of Return, the Payback Period and the Levelized Cost of Energy of a 200 MW floating wind farm in 9 potential locations within three electric tariff scenarios. The analyzed wind farm is composed of a novel spar-type concrete floating wind turbines. Some simple discussions are made on base of the analyzed values.

It is of interest to encourage publications for data of costs in different phases of realistic floating wind farms. However, to be published in Wind Energy Science, the manuscript must be organized as a scientific paper with highlight on scientific significance and quality.

This reviewer believe that the comments in following must be appropriately addressed

C1

before the manuscript could be considered for publishing as a journal paper.

1. The cost estimation model needs to be appropriately validated (e.g. value of each input may need to be given, explained and discussed to show the selection of the value is correct or reasonable, validation for the model is needed to show that all the critical aspects with respect to the cost have been appropriately addressed without error or unreasonable uncertainty, or at least some work is needed to show how good the cost estimation model is).

2. The authors need to clearly address what is the new scientific contribution of the manuscript. The methodology implemented in the cost estimation model has already been published. The very simple discussions with respect to values, e.g. NPV, IRR and LCOE, cannot support the conclusions made by the authors that the manuscript shows the pathways to reduce the costs. In fact, the manuscript presents very limited work with respect to the title of the manuscript (Pathways to bring the costs down of floating offshore wind farms in the Atlantic Area). In addition, due to lack of essential details, the method cannot be repeated by others for selecting locations of wind farms.

3. The discussions with respect to the cost estimation are not comprehensive and lack insight. For example, even without carrying out an analysis, it should be known that the maintenance cost will increase with increase of the distance to shore. The authors need to highlight scientific values on base of in-deep analysis with respect to the NPV, IRR, LCOE and/or other relevant values and have a good organisation to make the analysis convinced.

In summary, this reviewer feels that the current version of the manuscript sounds like a business report rather than a scientific paper. This reviewer would like to encourage comprehensive publications with respect to cost estimation and methods for reducing floating wind turbine costs. However, this reviewer cannot support for publishing the manuscript in its current version due to the comments mentioned in above.