

## ***Interactive comment on “A Systematic Approach to Offshore Wind Turbine Jacket Pre-Design and Optimization: Geometry, Cost, and Surrogate Structural Code Check Models” by Jan Häfele et al.***

### **Anonymous Referee #2**

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This paper presents an approach to offshore wind turbine jacket pre-design and optimisation. A jacket model and a cost model are developed in this work.

Specific comments are as follows.

#### 1. Introduction

The novelty/contribution of the paper is unclear and should be highlighted in the introductory section.

#### 4.1. Training and Validation Data Sets

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Please justify the values used for jacket model parameter boundaries in Table 1.

#### 4.3. Time Domain Simulations

Please elaborate how the soil is modelled in the model to take account of the soil-structure interaction.

#### 4.4. Post-Processing of Time Domain Results

Please justify the choice of S-N curve used in the study.

Please provide the references for values of wind and current speeds as well as the values for significant wave height in Table 3.

#### 5. Example

Please justify why normal distribution is used for all cost model parameters.

Please justify the values of standard deviation in Table 5.

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