# Impact of waves in deep water on large floating offshore wind structures

J.A. Sirvent

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## System design



Parameter	IEA 15 MW Reference Wind Turbine
Furdificter	
Power rating [MW]	15
Turbine class	IEC Class IB
Rotor orientation	Upwind
	optime
Control	Variable speed, Collective pitch
Cut-in wind speed [m/s]	3
Rated wind speed [m/s]	10.59
Cut-out wind speed [m/s]	25
Rotor diameter [m]	240
Blade size [m]	117

### **Choice of location**



NASA, 2019

## Impact of waves on the electrical power



# Discussion

• No significant difference in the results

- Limitation of these results
  - Electrical power output too low
  - No optimisation for different sites
- Recommendations on future work
  - Work on coupling wind and waves
  - Optimisation of design