SCOTSTREAM

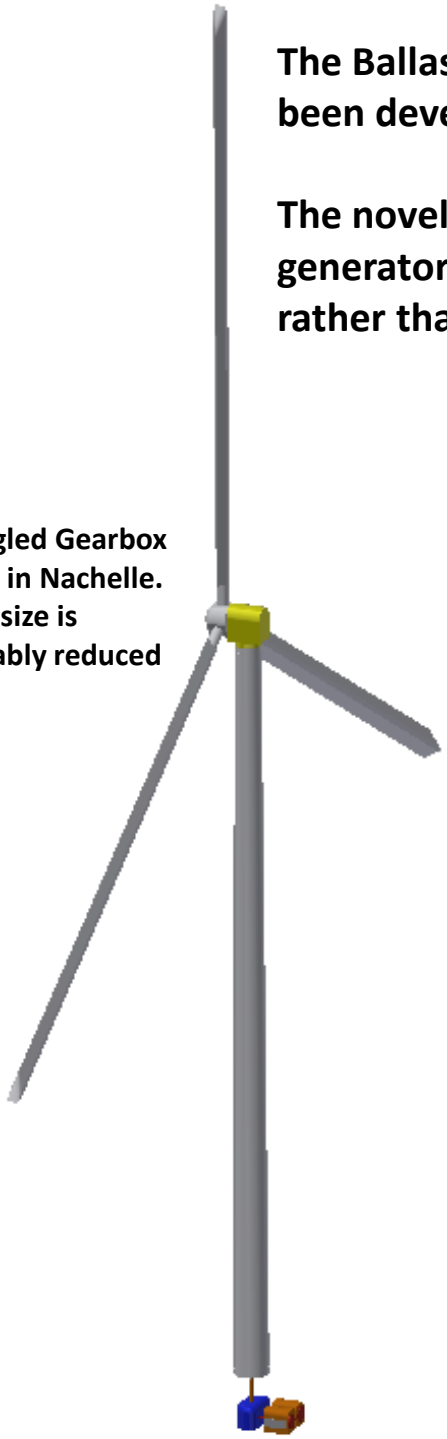
Ballast Tower

The Ballast Tower is a new design that has specifically been developed for floating wind applications.

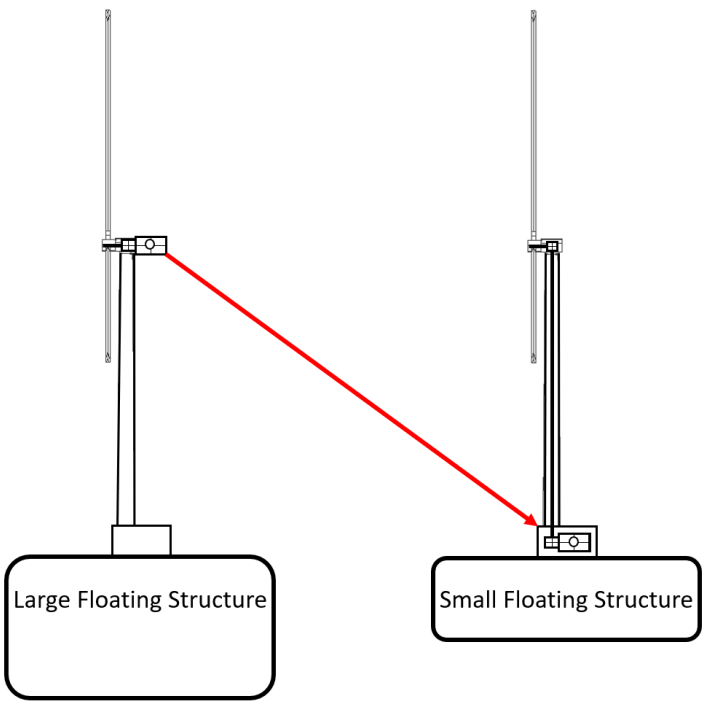
The novel feature of the device is that the heavy generator is mounted below the base of the tower, rather than in the Nachelle at the top of the tower.

The benefit of this design is that the structural loading on the tower will be considerably reduced.

As the loadings on the tower will be less then the size of the supporting floating structure will also be reduced.



Right Angled Gearbox mounted in Nachelle. Nachelle size is considerably reduced



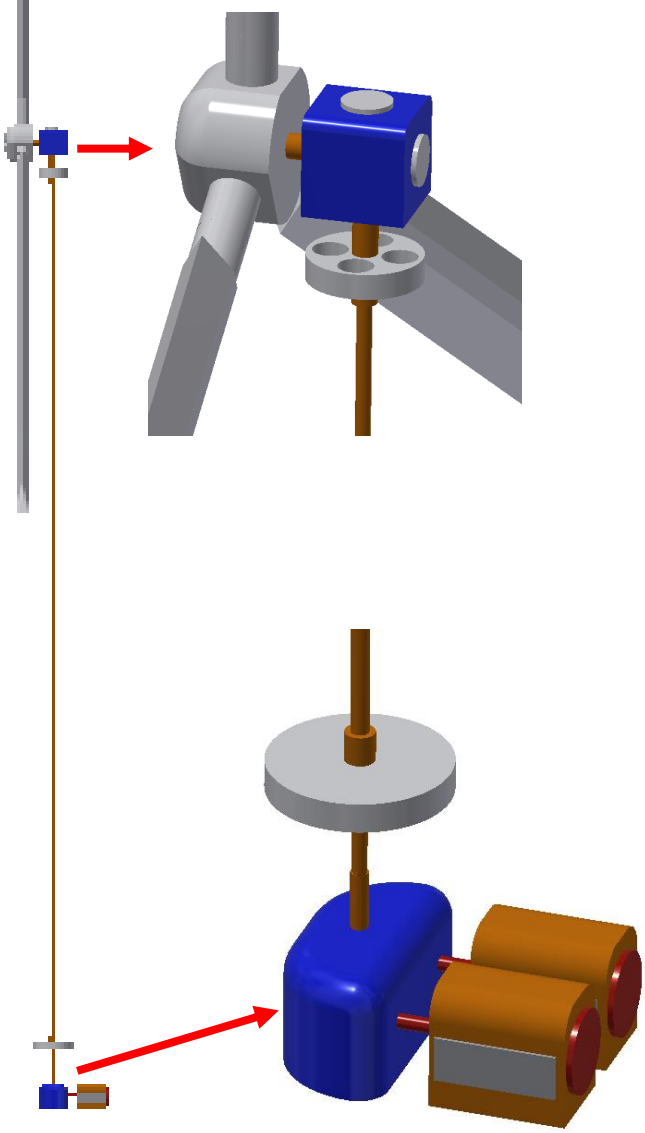
Right Angled Gearbox mounted in the base of the tower.
2 off smaller Generators can be used instead of 1 large Generator

A right angled gearbox will be mounted in the Nachelle. This will transfer the drive from the blade hub into a vertical drive shaft.

The vertical drive shaft will run from the top of the tower to the base of the tower.

A right angled gearbox at the base of the tower will transfer the drive into one or two generator units.

Two 10 MW generators could be used on a 20 MW Wind Turbine.



The size of the Nachelle will be considerably reduced, as the generator and switchgear can be housed in a machinery room below the tower.

There will be less of a requirement for support technicians to access the top of the tower to perform maintenance.

The generators will be mounted at the deck level of the floating structure. A handling system can be used to enable the generator to be easily moved onto a support vessel for replacement.

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