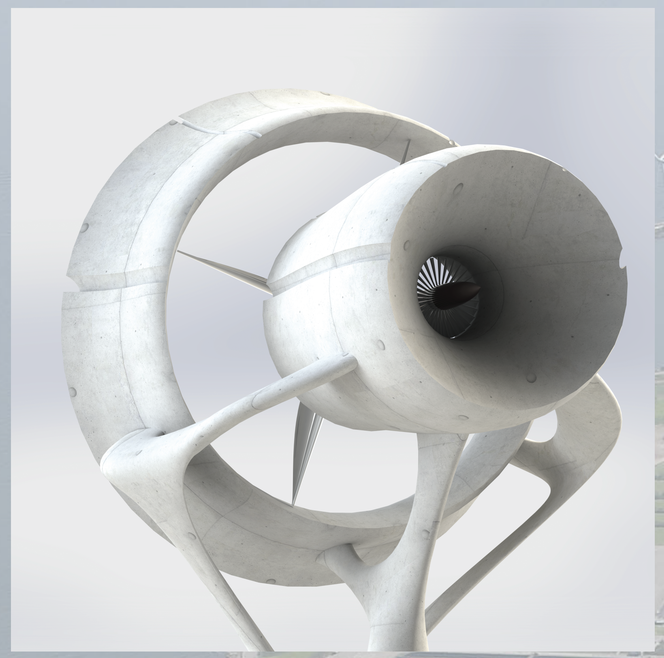
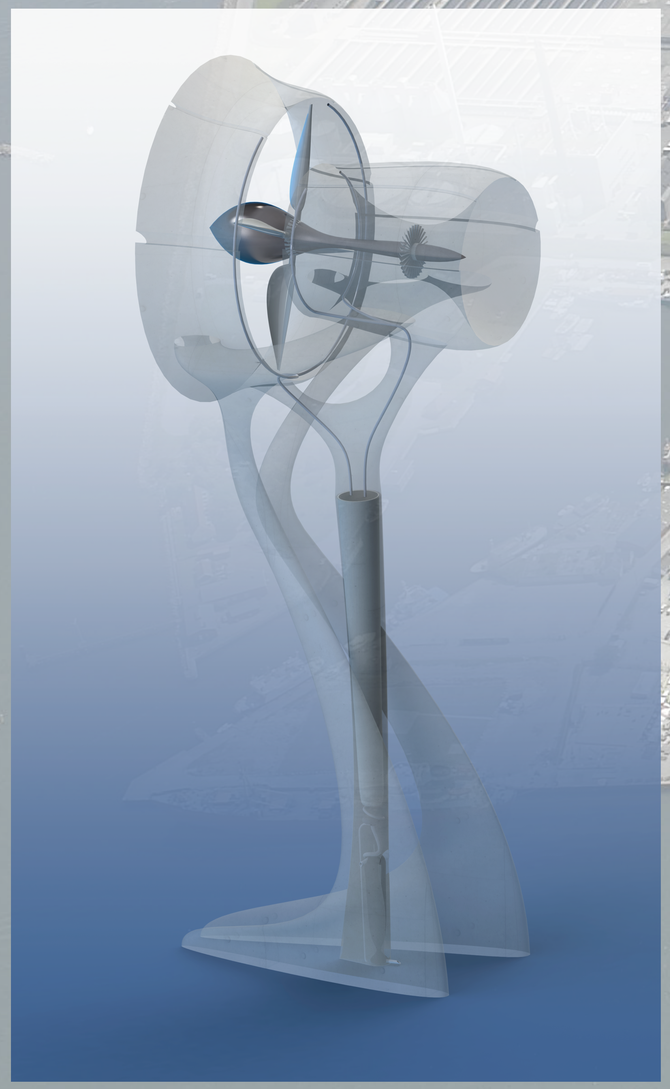




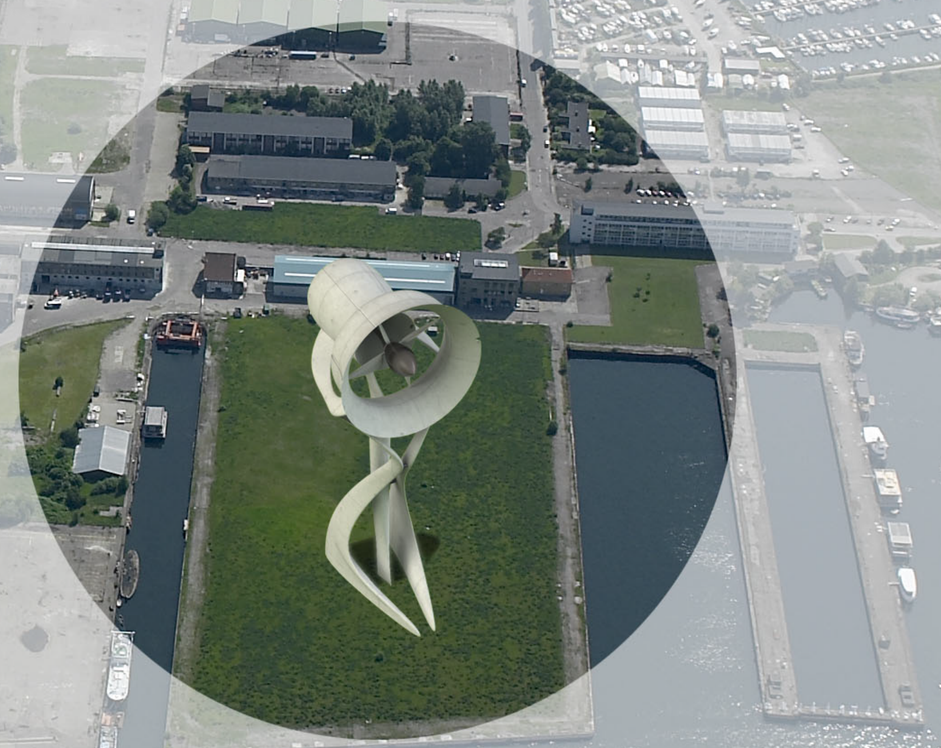
HORN consist of two wind turbines aligned on the same axis, contained within a concrete structure inspired by jet engines and two water reservoirs each powering a different type of turbine.

The structure of HORN is made out of concrete and steel to ensure longevity and strength. The structure accelerating the air speed is made of hollow concrete reinforced by several steel sections.

Both turbines are coupled on the same generator using a gear box and clutches. The generator is situated behind the second turbine. Using two different turbines operating at different speeds ensures that the electricity production will be less dependent on the variation and turbulence in wind velocity while also allowing the device to create electricity for a wider range of velocity.

The jet body accelerates the wind but it also corrects turbulence and ensures that the wind travels along the axis of the turbines, even if the direction of the wind is not aligned with the turbine.

The amount, variety and ease of manufacturing the technologies to harvest power from renewable sources of energy invite us to continue experimenting; instead of trying to scale up any viable solution. By exploring different technologies of power harvesting from renewable energies with significant improvement on the total power produced, HORN showcases the ability to search for sustainable solutions to our energy dependence.



Horn