

# WindTech refurbish old 50 Hz wind turbines to new 60 Hz wind turbines

While the wind industry is going fast and strong these years, it's still important to remember the old wind turbines built 20 years ago. These wind turbines are often replaced with newer and more efficient models. This is despite the fact, that a refurbishment can often revitalize and modernize an older wind turbine.

**This is WindTechs specialty.**

A few months ago, John Hogg from Free Breeze, Canada, bought 3 Italian secondhand Vestas V47 wind turbines from 2004. These turbines, which would have otherwise been discarded, will be given a full refurbishment in Denmark, and shipped to a Texas wind turbine park.

After John Hogg (The buyer of the wind turbines) contacted WindTech and chose us to perform the refurbishment, WindTech received the old Vestas V47 wind turbines from Italy. The extensive refurbishment project is estimated to run 8-12 weeks. During this time, WindTech will be disassembling the nacelles completely, to access the main components. The main components are usually subject to extensive wear and tear during their use. Because of this, the main components will be subjected to thorough tests and measurements.



*Here we see two of three nacelles as they were received at WindTech headquarters.*

After the preliminary tests are done, the real work begins. Disassembling and refurbishment, is nothing new to WindTech. The main challenge in this project however, is that the refurbishment includes the transformation of the original 2004 50Hz turbines, into US 60Hz turbines. Not only is this kind of refurbishment incredible extensive, but it is also very complex.

Since the 50Hz EU wind turbines and the 60Hz US wind turbines are incompatible, some parts must be replaced to work with the US energy infrastructure. This process primarily involves replacing or renewing the gearbox, the motors, and the control system. After disassembling the nacelle, and its main components, WindTech cleanse and washes every component. After this, the components are ready to be inspected and controlled for wear and tear. Some parts can be refurbished, and some components must be replaced with new 60Hz parts. WindTech always uses high quality bearings and components in our refurbishment process. Afterwards the components are reassembled and painted, and the final tests are initiated. Finally, the nacelle is reassembled and the whole process is checked thoroughly.

Once the project is done and the nacelles have been completely refurbished, transformed, and assembled, they will be shipped to their destination. In this case, to Houston, Texas.

WindTech always enjoy working with our partners, especially when given a chance to contribute to the global green transition. WindTech hopes that our contribution in collaboration with John Hogg, provides the US corporations with renewed faith in international teamwork and relations. The wind industry relies on OEM-companies to move us forward with innovating new ideas. The older wind turbines, however, will still need to be maintained - And WindTech will always be here for that.