

Remanufacturing Provides New Life To Used Wind Turbines

By: Jason Jacobs

Remanufactured or used wind turbines are a viable option for many seeking to take advantage of clean and renewable wind power. Schools, small and rural communities, farms, and businesses are just a few of those taking part in the repowering of aging and decommissioned wind systems. These renewable energy users are operating systems with the same nameplate capacity as new, but at a fraction of the price.

With the renewed interest in alternative and renewable energy sources over the past decade, along with renewable energy mandates and government incentives, new investment capital has been pouring into developing more efficient machines with higher output capacities. Wind turbine technology has rapidly advanced over the past decade. Many manufacturers are now building turbines with name plate capacities of several megawatts.

The 1979 oil and energy crisis in the United States spurred the installation of thousands of wind turbines in the American Southwest. Today's turbines are producing as much as one hundred times the power of smaller wind turbines that were installed during the early 1980's California wind rush. Denmark too was one of the first countries to adapt wind power on a larger scale. But now the Danish government has decided that the number of wind turbines should not be increased, and consequently wind turbine operators must take down existing generators, in order to get permission to build new ones.

It can be financially advantageous to erect a wind turbine with a larger nameplate capacity before the existing wind turbine is technically outdated. This is especially the case for Denmark, as the Danish government financially supports these repowering solutions. The advancement in technology, and financial incentives, is allowing wind farm operators to significantly increase their electricity production out of the same area of land both in the United States and in Europe.

However the existing wind turbines are often in good condition, and have many years of power producing life left. Some companies are "remanufacturing" these turbines and claiming they will continue to operate for an average of twenty years or more with proper maintenance. But not all remanufacturing companies are the same.

If a second hand turbine is properly remanufactured, every part and system from top to bottom will be overhauled. Bearings will be replaced, generators rewound, brake systems renewed, blades and towers inspected and cleaned. Most importantly the "gear box" will get the most attention. This is the system that endures the most wear as it's designed to spin one thousand revolutions per minute for fifteen, twenty or thirty years. To take it a step further, the best remanufacturing companies are updating the control systems with new, digital, computerized systems that can be monitored remotely through the internet.

The most important thing for buyers is to make sure the company selling the remanufactured wind turbine stands behind their finished product. Most remanufacturers offer at least a one year warranty. Good companies will offer at least a two year warranty and the option of an extension. It's also important for consumers to check with their states renewable energy incentives programs. Some states like Ohio require a five year warranty in order for the turbine to be eligible for their subsidy schemes.

About the Author:

Jason Jacobs is the Head of Operations for FESCO Direct, LLC Wind Energy Division and a member of the executive management team. FESCO Direct is a leading global provider of new, used and remanufactured wind turbine equipment. With corporate head quarters in the U.S.A., the company provides full service installation to retail customer's worldwide and discounted equipment solutions for wind energy professionals.