UL, CSA Group and the Superwind 350 wind turbine system

The CSA Group (formerly the Canadian Standards Association) is a Canadian standards organization that develops standards in 57 areas. The CSA Group is composed of representatives from various industry, government, and consumer groups.

UL LLC is a global safety certification company headquartered in Northbrook, Illinois. Known throughout the 20th century as Underwriters Laboratories, in January of 2012 it transitioned from a non-profit organization to a for-profit company in the U.S. At that time a new subsidiary named UL LLC took over Underwriters Laboratories' product testing and certification business. UL is one of several companies approved to perform safety testing by the U.S. federal agency Occupational Safety and Health Administration (OSHA).

UL does not test or certify wind turbines with an output of less than 2000 watts and/or a system voltage under 60 volts. Additionally, as the Superwind 350 (SW-350) is not a grid connected device, there is no applicable UL category.

Although many SW-350 installations in Canada carry a CSA certificate, CSA will not issue the SW-350 or the SW SRC Charge controller individual pre-installation "stand alone" CSA certificates. One reason is simply that a CSA certificate is not required for most installations (i.e. a non-domicile, off-grid battery charging system producing low DC voltage). Another is that for those installations where a CSA certificate is requested and might be applicable, CSA's policy and approach is to stamp the completed system as a whole, but not the individual Superwind system components. There are many ways to integrate the Superwind 350 system (turbine, charge controller, diversion load) into a system. CSA's certification of the completed system ensures that no installation variables have been introduced that could circumvent the requirements for CSA approval.

Historically, by using this system method approach for certification, CSA has stamped numerous installations of the SW-350 on trailers, tower stations (with emergency man-safe shelters) and even some homes - but always post construction.

The SW-350 SRC charge controller follows IEC protocols and is CE registered and regulated for high quality (made in Germany). It also uses temperature compensating PWM technology as well as diversion. Additionally, the diversion load is a calibrated unit and is also rated for outdoor use.

The SW-350 has been in use in Canada since 2006 and all these attributes have been part of many official CSA notations during inspections that resulted with an approval.

For more information please contact Mission Critical Energy at (716) 276-8465 or visit us at <u>www.missioncriticalenergy.com</u>.