

## HDC Series helps improve environmental sustainability

Nowadays environmental sustainability is a trending topic that affects all aspects of our life with no geographical distinction as it is about responsibly interacting with the planet to maintain natural resources and avoid jeopardizing the ability for future generations to meet their needs.



The continuous development and improvement of new green energy supplies is evidence of the positive response to stabilizing the current or past (if we want to be optimistic) disruptive relationship between Earth's two most complex systems: humans and the living world.

Among the sustainable and renewable energies, the growing industrialization of wind energy is one of the most important to provide better air quality with low levels of resource waste by exploiting what the Earth is offering naturally with no human intervention until

the transformation process.

Wind turbines are the key component of this natural but aided transformation of resources as they convert the kinetic energy from wind into usable electrical energy.

### The challenge

Harnessing wind power is the most mature way of generating power that is qualified for large-scale developments and has commercial development prospects meaning it has been largely developed in recent years.

Reliable operation, convenient maintenance and easy replacement of functional module systems are all crucial for a wind power station.

In one such example, a China based manufacturer for onshore and offshore direct drive wind turbines was struggling to find a reliable connector series to equip their turbines.

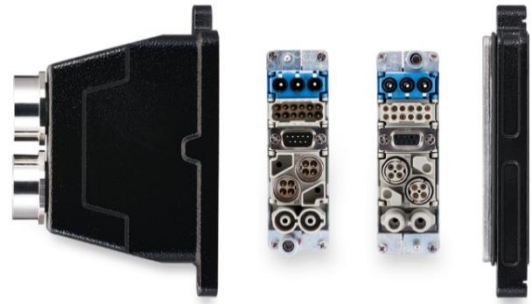
They needed resilient, stable, and flexible interconnect solutions they could incorporate into the design of their wind turbines to satisfy a variety of application requirements with a single point of supply and with a single source solution.

As well as being robust, versatile and compact, they needed connectors that were easy to assemble and maintain, configurable for different applications and models, and could also help reducing the parts to keep in stock.

### The solution

HDC series of Heavy Duty Connectors was the ideal solution to provide reliable electrical connections for wind power generation. The HM flexible and combined configurations and HE extendible 500V configurations, as well as others were the selected configurations that were able to satisfy various connections of weak and strong currents in different applications of wind power.

Based on a modular design, the HDC connectors were able to satisfy the customer's requirement offering a stable and reliable electrical connection for different parts of the wind turbines, such as the variable pitch blades, the sliprings, the drive system and the power system.



The customer was also impressed with the possibility of combining power and signal in one connector reaching up to 200 Amps of current connection and of selecting various kinds of hoods and housings.

Easy maintenance and replacement of single modules, rapid surefooted installation, waterproof IP68 protection and the anti-corrosion characteristics of the metal shell, which are ideal for harsh outdoor environments, were the other key features that made the different configurations of the HDC series the selected solutions for these wind turbines.

Last but not least, the shorter lead time compared to the industry average and the competitive pricing of the HDC connectors have generated the customer's confidence to assign Smiths Interconnect this important project that can help the environment with sustainable energy generation.

Components are just a small portion of the whole new emerging devices and applications that contribute to a more environmentally friendly energy supply but they can help to avoid wasting resources and offer the necessary durability that a modern power generator requires.

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