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PRESS RELEASE**



## **Boosting Wind and Solar Power Sustainability with Corrosion Prevention**

If a wind or solar installation doesn't last as long as its expected 20-30 year service life, is it really a sustainable use of resources? With corrosion as a key enemy of wind and solar longevity, [Cortec®](#) reminds manufacturers and investors not only of the importance of proper materials selection during the design phase, but also of the benefits of a few simple corrosion preventative steps during shipping and maintenance.



### **Shipping Solar and Wind Components Corrosion-Free**

One of the first corrosion prevention tasks is to get solar panels and wind turbines to the jobsite in like-new condition. This can be challenging when fluctuating temperatures, humidity, and even salt spray heighten the risk of corrosion during the journey. The right protective packaging can eliminate this problem.

#### *ESD Packaging for Sensitive Solar Components*

When packaging photovoltaic equipment, manufacturers should think of protecting ESD (electrostatic discharge) sensitive components such as bypass diodes, as well as the metal supports, frames, wires, and electrical contacts that could be subject to corrosion. [EcoSonic® VpCI®-125 HP Permanent ESD Films and Bags](#) take care of both concerns. Vapor phase Corrosion

Inhibitors in the film inhibit corrosion on a variety of ferrous and non-ferrous alloys, including galvanized steel, aluminum, and brass; while permanent static-dissipative properties help reduce or eliminate static buildup in the package.



#### *Outdoor Shipment of Large Wind Components*

In the case of wind turbine components, size, rather than ESD protection, is one of the big issues. Large wind turbine shafts, rings, and hubs often receive the brunt of attack from harsh weather because they may be transported on open truck beds or stored onsite for several years until installation is completed. Fortunately, [VpCI®-126 HP UV Shrink Film](#) and [MilCorr® VpCI® Shrink Film](#) are two anticorrosion films designed to hold up well in outdoor conditions and available in sizes large enough to shrink wrap giant components. If needed,

additional protection can be added, such as [VpCI®-368 D](#) removable coating for more vulnerable surfaces and/or [Desicorr® VpCI® Pouches](#) for additional corrosion protection plus desiccant action within equipment and packaging voids.

#### **Corrosion Prevention in Control Panels**

Once solar panels and wind turbines are put into service, the job of corrosion protection is not over. Solar panels and wind turbines are inherently equipped with wires and electrical contact points that merge inside control boxes potentially subject to the ingress of oxygen, humidity, and chlorides. Placing a small self-stick device such as the [VpCI®-105](#) or [VpCI®-111 Emitter](#) inside is an easy and effective way to guard against corrosion surprises that would require early repair or replacement of any exposed electrical contact points within the panel. Similar to [VpCI® films](#), these devices release corrosion inhibiting vapors that diffuse throughout the space and adsorb on metal surfaces (ferrous and non-ferrous) to which they are attracted. It is much easier to replace these once every two years as part of routine maintenance rather than risk the potential of corroded metal contacts that could interrupt operations and require more extensive repair.



#### **Extra Coatings for Structural Protection**

In some cases, extra coatings may be desirable on various structural components. For instance, wind turbine base bolts are especially prone to corrosion and are good candidates for VpCI®-368. Although classified as a removable coating, VpCI®-368 offers such heavy duty corrosion protection that it is often used in offshore platform layups. If

(unlike normal) solar panel frames and supports are made of carbon steel rather than corrosion resistant aluminum or galvanized steel, an extra protective coating such as [EcoShield® VpCI®-386](#) or a primer/topcoat combo such as [VpCI®-396](#) and [VpCI®-384](#) is definitely in order to reduce solar structural corrosion. In some extreme conditions, owners may even find supplementary coatings warranted for an additional layer of protection on aluminum or galvanized steel in the severest environments. In these cases, a wash primer such as [VpCI®-373](#) should be used before top-coating for better adhesion.

### **Keep Renewable Energy Sustainable**

While the suggestions above do not cover all possible corrosion concerns for wind and solar energy, they are good places to start for basic corrosion prevention. Protecting solar and wind components during transit is critical to getting off to a good start, while protecting control panels and vulnerable structural components as part of routine maintenance can promote desired longevity by reducing corrosion at some of the easiest points to address. [Contact Cortec® to learn more](#)

[about protecting solar and wind components during shipping and maintenance to maximize the sustainability of renewable energy.](#)



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