



[pioneertechsolutions.com](http://pioneertechsolutions.com)



THE SOLUTION YOU NEED.



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# GET TO KNOW US...

*We are the leading provider for efficient solutions* regarding contamination issues in the electric power market. We utilize our special brand of nanotechnology to solve the problems that have plagued the market for years.

*a much more efficient and cost effective application.* Our approach of coating your new insulators in our facility ensures that the material is not disturbed by environmental issues and will perform as intended. We ship it back to you ready for immediate install! If you need a solution now, in the field, we offer that as well. We have successfully field applied and our customers have experienced very positive results.



## WHAT IS THE PROBLEM?

Porcelain and glass insulators become contaminated and the solutions for addressing the problem are ineffective. As you know, contaminated insulators can cause flashovers and power outages.



## WHAT IS NANOTECHNOLOGY?

Nanotechnology is science conducted at the nanoscale, which is 1 to 100 nanometers. One nanometer is a billionth of a meter. Essentially, nanotechnology relies on controlling and manipulating individual atoms and molecules. Key advantages to working at the nanoscale level include higher strength, lighter weight, increased control of the light spectrum, and greater chemical reactivity than working on a larger scale.

Hydrophobic nanocoatings like ours are used to protect silica surfaces such as glass, quartz or granite from water stains and other contamination by making the surface highly hydrophobic. When applied to a silica- based surface, nanocoatings



## WHAT'S OUR SOLUTION?

We provide an effective solution that is a change from the silicone greases or RTV coatings that others may use. We use nanotechnology as the alternative to existing methods to combat the contamination problem. We've dedicated years of research and development to determine the most suitable solution. The key is the coating that we apply BEFORE installation. *This allows for*

form either a hydrogen-bridge or covalent bond. *In a multi-molecular bond, the coating shares the electrons within the surface itself, thus becoming a part of it.* This points to the fact that **the adherence factor in our nanocoating is higher than regular coatings.**



## VERIFIED RESULTS!

We've run our coating through 3rd party independent laboratory testing of nano hydrophobic coatings (results for your review upon request) and we are confident we have the product that will allow your systems to run at peak efficiency and keeping the potential of contamination at bay.



## WHY THIS IS THE SOLUTION YOU NEED.

The nanotechnology within our hydrophobic coating improves the performance of insulators, with a focus on durability, longevity, effectiveness, expense, and ease of application. When applied to glass and ceramic insulators, hydrophobic nanocoatings reduce the adherence of water, salt, dirt and other contaminants to the surface of insulator. Unlike existing coating methods, which are expensive, time- consuming and temporary, our nanocoatings are optically clear as they are only up to 100 nanometers thick. The covalent bond (which won't peel, chip, or crack) is meant to create higher adherence, which would indicate the coating would last longer.

- **Protect the insulator from contaminants.**
- **Improve the performance of the insulator.**
- **Smart & Efficient. Saving time and money, thanks to an up front process that works.**
- **The low maintenance properties of our coating means its not a temporary fix, but a real, LONG TERM solution**
- **Does not need high pressure washers**
- **UV and Humidity resistant**
- **Non Toxic and Sustainable**

*The end results will please all involved!*

Reduction/elimination of contamination takes away the build up that could lead to flashovers and system outages. Having a low maintenance coating from Pioneer Technology Solutions leads to less on site repairs and downtimes for cleaning.

*The more efficient, full running system, leads to happier stakeholders at every step in the process!*

