EPI FAQ

WHAT IS EPI TECHNOLOGY?

The EPI Technology is an advanced HVAC coating process for condenser coils and exterior metal cabinetry. The EnergyCor® coil coating is a liquid, glass-like coating. The cabinet coating, CryoCoat XT®, is an Energy Star rated heat resistant coating.

WHY SHOULD I SPEND MONEY ON SAVING ENERGY?

Energy is typically the second or third highest building operational expense in your budget. Costs are expected to increase 3-7% annually for the foreseeable future. 40% over 5 years in California alone.

WHAT LEVEL OF ENERGY SAVINGS CAN I EXPECT FROM EPI?

Results can vary by unit age and condition, but used in combination, they can reduce overall cooling energy consumption by 15% or more, reduce unit run times, and extend useful unit life by 50% or more.

HOW CAN A COIL COATING IMPROVE MY EFFICIENCY?

Many traditional Epoxy and Polyurethane coatings do not improve efficiency and, because they are quite thick, (4-8 mils), actually impede heat exchange on the condenser coil and have no impact on run-time. Our EPI coating is one of a kind. It is 0.2 mils thick. That is over 40X thinner than traditional coil coatings and it is precisely this “innate thinness” that separates it from every other coating. This thinness allows it to wick into cracks and crevices on the coil and actually fill the gap between the fin shoulder and copper tubing that loosens with age and wear and is responsible for most efficiency loss. Our coil coating forms a covalent bond that becomes a permanent part of the coil and tube. When it hardens, it reconnects the fin to tube connection and can return the unit back close to its original factory efficiency, as measured by kilowatts per ton (KWT). Our Energy Star rated exterior heat resistant coating can reduce run-times significantly, by reducing the exterior temperature of the unit to within a few degrees (5-10°F) of outside ambient temperature, even on very hot days.

HOW CAN AN EXTERIOR HEAT RESISTANT COATING REDUCE MY UNIT’S RUN-TIME?

There are only two things that impact your unit run-time:

1) Warm air returning to the unit from your building (load).
2) High interior temperatures inside your HVAC metal cabinet. We can positively impact that. Our Energy Star rated exterior cabinet coating, CryoCoat XT®, will effectively block 95% of the sun’s solar load, thus dramatically reducing the exterior temperature of your unit to within 5-10°F of the outside ambient temperature. This will definitely reduce your unit’s run time significantly.

Lower cooling utility bills, extended unit life, less repairs and lower maintenance costs are your results. “Run Less with Greater Efficiency!"

HAS ASTM TESTING BEEN DONE?

Third party testing labs have conducted the following standard testings:

ASTM B-117 Salt Chamber Testing and have substantiated that the EPI HVAC protective treatments have performed in excess of 4,000 hours

ASTM G-21 Mold Inoculation Tests also substantiate *zero* mold growth occurred on treated samples, while control samples experienced 60-100% mold growth

ASTM D-4060 Tabor Abrasion Test showed a 12.5 mg film loss using a CS-10 wheel at 1,000 cycles.

WILL THIS APPLICATION AFFECT MY FACTORY WARRANTY?

NO... Absolutely not! EPI has worked with many of the major manufacturers for over 10 years, and as we do not change the inner workings of the HVAC, we have never experienced a warranty issue.

HOW IS THE IMPACT ON ENERGY SAVINGS DETERMINED?

Energy studies conducted by AT&T, Florida Power & Light, Southern California Edison, TCU, as well as the EPA, indicate treated units significantly reduce the efficiency degradation curve on HVAC coils. It is further noted, units experiencing periodic cleaning maintenance will operate more efficiently than units not cleaned.

WHY DOESN'T MY MANUFACTURER OR MY HVAC CONTRACTOR OFFER THIS SYSTEM TO ME?

Our technology is available only through Energy Performance International®. Since 2008 we have been providing energy optimization solutions in the Southern United States predominantly in Texas and Mississippi and have only recently, begun our national and international expansion.

HOW LONG WILL IT TAKE TO GET OUR MONEY BACK?

Your Return on Investment (ROI) will depend on how much you are currently paying per kilowatt hour, peak demand charges, hours of run-time, condition and age of your equipment, and relative climate temperatures. Please note that the older the unit or the warmer the ambient temperatures, the better our results. Typical ROI averages 18 - 24 months.

HOW OFTEN WILL MY COILS NEED TO BE CLEANED AFTER THE APPLICATION?

Because of the glass-like surface that is created by our coil coating, mold, mildew, bacteria, dirt and other environmental debris will not adhere to the surface and definitely will not get impacted into the coil as with a non-coated coil. All such debris are repelled and rejected by the glass-like coated coil surface and will require only a mild washing with an ordinary garden hose (no high pressure needed) to completely remove any surface dirt. An annual cleaning of this nature should be all that is needed to maintain a clean coil.

HOW LONG WILL THIS PROCESS LAST AND WHEN WILL I HAVE TO DO IT AGAIN?

Our Technology is designed for very long life and harsh environments. Both coatings are known for performing for many years in the harshest environments and our goal is to provide you with a "one-and-done" solution. We expect both coatings to last the entire useful life of a unit.

Our coil coating is an inorganic coating that chemically bonds, at the atomic level, to the bare, non-ferrous aluminum coils and copper tubing. When properly applied, this covalent bond actually becomes a part of the metal substrate. In contrast, phenolic organic paints adhere by "London Force" adhesion, which means they cling to whatever surface anchor pattern is available. They can chip, peel, and dynamic energy forces, such as expansion, contraction, and vibration can cause organic coatings to prematurely lose their adhesion. The covalent bond formed with the EPI coating is not impacted by these forces. A typical rule-of-thumb is, whatever life the unit experiences un-coated, depending on existing environmental exposures, the EPI treatment should double the useful life of that unit. "Run Less with Greater Efficiency!"

Remember, doing nothing does not reduce your cost. Cooling and heating costs are projected to increase by 40% or more over the next five years. Maintenance costs will not be going down either. So your cost of doing nothing simply guarantees higher energy costs, higher repair costs and higher capital expense replacement costs.

Net Present Value (NPV) - ASHRAE has determined average HVAC commercial unit replacement costs at $2,000/Ton. EPI can add many years to your unit's useful life. Consider the NPV savings on deferring replacement of a $100,000 unit for the next 5-7 years. Just analyzing the Net Present Value (NPV) of being able to defer your current capital expense for new replacement units at $2,000/Ton for those years, may actually save you more than your actual energy savings, and it goes directly to your bottom line that year.