

GM Bowling Green Assembly Plant



The GM Bowling Green Assembly Plant, production site of GM's iconic Chevrolet Corvette, installed UVGI into their existing HVAC units as part of an energy-efficiency improvement project.

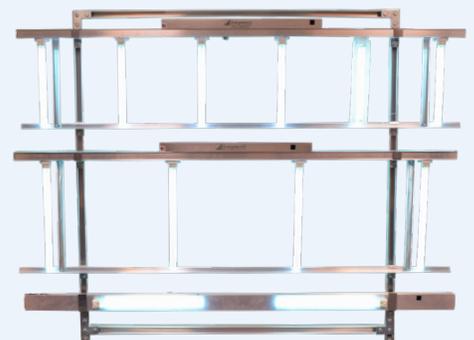
Why?

The design engineering firm introduced the concept of UVGI to the Bowling Green assembly plant.

The addition of UVGI will not only help improve HVAC efficiency and bring down energy costs, it will also reduce HVAC maintenance costs.

Before the pandemic, the General Motors Bowling Green Assembly Plant was well into a massive, multiyear, energy-efficiency improvement project to reduce its air conditioning load and overall natural gas flows for the plant. Production of GM's iconic Chevrolet Corvette moved to the Kentucky town in 1981, and many of the original HVAC units were still in use nearly 40 years later. The units were in operation but not very efficient.

This air handling retrofit project included Lumalier AR Series fixtures.



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The design engineering firm that Bowling Green Assembly contracted to work on the project recently upgraded all of the HVAC units but suggested installing UVGI to help clean the metal surfaces inside the water coils that create cool air. Over time, it will help improve efficiency and bring down maintenance and energy costs.

This is the first GM factory in North America to install UVGI, and it managed to offset a significant amount of project costs by using the TVA EnergyRight's UVGI incentive offered through the local power company.

What Happened

With the help of TVA's EnergyRight UVGI incentive program, they were able to offset a significant portion of the project costs and have UVGI fixtures installed at the plant.

UVGI is not new technology, but the SARS-CoV-2 pandemic certainly spotlighted the technology's potential benefits in slowing the spread. For decades, it's been primarily used in hospitals to help eliminate contagious microorganisms. Other companies, like GM Corvette, use it to help keep maintenance costs down by preventing the buildup of dust, dirt and contaminants, which improves the efficiency of newer HVAC units.

End Result

Beyond the benefit of improved energy efficiency, based on the dimensions and the speed of the air moving through the air handler where the UVC fixture is installed, the Lumalier system is producing well over 2000 microwatts per centimeter squared, which has been proven to be extremely effective in inactivating SARS viruses and many other pathogens. The reduction of airborne pathogens will help to mitigate germ spread and also provide IAQ benefits.

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