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D.C. building owners seek ways to clear the air of coronavirus, from humidity to ionization

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Mechanical engineering expert [Ray Doyle](#) doesn't believe there's a silver bullet to combat the coronavirus outbreak, but he does have a piece of advice for commercial property owners in Greater Washington.

"Don't bury your head in the sand and wait for it to go away," said Doyle, managing principal and life science practice leader in the Rockville office of [WB Engineers & Consultants](#). "You can't filter the bad people out, so you have to filter the air."

Wearing face masks and practicing social distancing only goes so far, and as time wears on, people will let their guards down. Without on-the-spot testing, it will be difficult to detect and bar entry to asymptomatic carriers of Covid-19 as people start returning to their offices from work-from-home exile. That notion has prompted commercial real estate owners and property managers across Greater Washington to turn to environmental and mechanical



CATHY CHENEY

Improving the way air is filtered and treated can help to minimize the spread of infectious diseases.

engineering firms like WB Engineers to help them assess and amp up the heating, ventilation and air conditioning systems in their buildings to minimize the spread of the deadly virus.

While the tenants and employees who work in those buildings have a key role to play in a safe return to the office, some believe the hard costs invested in building infrastructure offer perhaps more of a return in terms of combating Covid-19.

"The virus is not going to go away by the time we're going back to the office," said [Doug Fleit](#), CEO of American Real Estate Partners, which owns properties including Rosslyn City Center. "We're going to be in position as early as possible, and our initial target date is mid-May, to be ready to receive a higher volume of employees and tenants."

[Russell James](#), executive vice president in the Arlington office of mechanical engineering firm Dewberry, said he expects employees to cast a more wary eye on the HVAC systems inside their offices as they return to the buildings. Not every building owner will have the resources or time needed to make major overhauls of those systems in the near term, but there are plenty of interim steps they can take while they plan for longer-term improvements.

Those steps could include letting HVAC systems run day and night, increasing fan speeds and replacing worn parts — all of which can also help increase the flow and volume of air moving through those systems to improve its quality.

Another quick fix is a product offered by AtmosAir Solutions, used by firms with a local presence including Brookfield, Gensler and T. Rowe Price. Air passes through ionization tubes on its way into common area spaces, where the ionized air then treats contaminants as it encounters them. Tony Abate, director of operations at AtmosAir, said sales are up more than 600% since the outbreak.

"They're all making a plan for the reemergence of people to come back into their facilities, and [want to know] what are the layers of protection that they can provide so people can be assured of a healthy environment," Abate said.

The ionization concept was made popular by The Sharper Image and its Ionic Breeze, though the company filed for Chapter 11 bankruptcy in 2008 [due in part to litigation associated with that product](#). The technology has evolved since then, and is used by employers including the Army at Fort Belvoir, the University of Maryland and the D.C. court system, though its effectiveness in battling the coronavirus is still subject to some debate.

The system has its limits. It can't prevent the spread of a virus from person to person through direct touching, but Abate said it is part of the arsenal building owners and property managers can use to help minimize the spread.

Some of the fixes being promoted by firms, such as the use of ultraviolet germicidal irradiation, haven't been fully vetted for their effectiveness against the coronavirus in their proposed applications. Others are more tried and true, like pumping more outside air into a building to help crowd out bad air. All come with a trade-off, whether it's increased energy usage, greater up-front costs or the need for regular checkups and adjustments.

Doyle's consultations run the gamut of options, from the most simple to the most expensive.

Short-term fixes: Electrostatic cleaning made popular by products like the Clorox Total 360 System; dilution ventilation, which involves increasing the amount of air brought into a building's HVAC system to overcrowd and push out the bad air; and upgraded plumbing systems to prevent odors and sewage gases from seeping into the air.

Longer-term and costlier fixes: Ultraviolet germicidal irradiation, involving the use of a short-wavelength ultraviolet light in air handling and air conditioning units; photocatalytic oxidation, similar to how a car's catalytic converter reduces the release of toxic gases and pollutants created in the combustion cycle; ionization; and even humidification to reduce the spread of viruses.

Doyle cautions landlords to consult with an expert and do their homework first, as the items above come with trade-offs. Increasing the humidity in a building, for example, can cause side effects like mold and is more expensive during the winter months than in the summer, when humidity levels are naturally higher.

"You're giving them enough information to say this is the logical choice, this is where we need to be," Doyle said of his approach to building consultations. But he cautions: "It's not about energy right now, it's about safety. It's about eliminating the number of air particles that have live viruses in them."

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