



# Biotech IAQ Verification and Energy Assessment

## Technology Overview

New regulations for improving indoor air quality (IAQ) require effective solutions without sacrificing energy efficiency. Biotech IAQ and energy assessment includes diagnostics and software to test IAQ and HVAC performance. DNA-tagged particles are sprayed into the air to simulate the emission and mobility of infectious aerosols. Particle movement is tracked and documented with specialized software to identify opportunities for remediation and HVAC optimization. The DNA-tagged particles are sterile and approved for use in occupied spaces.

HVAC upgrades to enhance IAQ often come with increased energy use. Biotech IAQ and energy assessment provides building operators with baseline data to make science-based decisions for operational improvements and cost savings. Testing and analyses pinpoint specific deficiencies to make achievable recommendations to save energy and costs.

## Why is GSA Interested?

Biotech IAQ verification and energy assessment helps to document compliance with new CDC ventilation guidelines, ASHRAE 241, and UL requirements for controlling infectious aerosols. The platform limits the cost, energy, and carbon penalties often associated with common IAQ enhancements.

Attempting to improve IAQ without baseline data can lead to over-ventilation, excessive spending, and accelerated equipment degradation, all of which increase costs and energy consumption. Biotech IAQ verification and energy assessment can mitigate these risks. A vendor-provided case study identified portfolio-scale HVAC improvements with annual savings of \$50M and 78M kWh in energy.

## Deployment Potential

Testing and commissioning can be performed in any sized space with no limitations regarding building type or location. The testing takes a day and is conducted by certified professionals.

*Green Proving Ground (GPG), in collaboration with the U.S. Department of Energy, is evaluating the real-world performance of biotech IAQ verification and energy assessment in federally owned buildings within GSA's inventory. The technology will be provided by SafeTraces and coordinated with other ongoing evaluations of this technology.*