

Nadhim Zahawi MP,
Secretary of State for Education

Sent via email

10th February 2022

Dear Secretary of State,

Re: Indoor Air Quality concerns in Schools from Environmental Industries Commission (EIC)

We are writing on behalf the Environmental Industries Commission Air Quality and Noise working group who recently met to discuss concerns over the recent announcement that 9,000 air purifiers will be provided to schools that cannot provide sufficient ventilation to protect students and teachers from viral infection.

While Environmental Industries Commission applauds that decision, it is important that the air purifiers specified are fit for purpose, otherwise the investment will be entirely wasted, as happened in New York¹.

In order to ensure that the air purifiers are up to the task, EIC would respectfully ask that you consider the following critical points:

Technology

In its Covid-19 air cleaning guidance², the UK SAGE Committee's Environmental and Modelling Group recommends High Efficiency Particulate Air (HEPA) filtration systems to capture COVID-19 particles, with germicidal ultraviolet light (UVC) as a supplemental treatment to inactivate the virus.

Harmful side effects are associated with the kind of air purifiers sometimes referred to as using 'additive' technologies (based on indirect chemical reaction) as opposed to 'subtractive' (filtering and direct inactivation). SAGE warns against UVA/UVB, ionisation, plasma, electrostatic precipitation and oxidation methods, which have limited evidence of efficacy against the virus and/or significant concerns over toxicological risks during application.

¹ <https://gothamist.com/news/nyc-schools-bought-weaker-air-purifiers-now-underventilated-campus-are-more-prone-covid-cases>

² <https://www.gov.uk/government/publications/emg-potential-application-of-air-cleaning-devices-and-personal-decontamination-to-manage-transmission-of-covid-19-4-november-2020>

Strong airflow

Portable air purifiers must be heavy duty, with a powered fan system. This creates high static air pressure, which is necessary to allow sufficient air to flow through the HEPA filter and to boost air cleaning performance throughout an entire space, rather than just the air around the purifier machine itself.

Residential air purifiers using HEPA will not serve as a substitute for a hospital grade device containing a powerful fan.

Cost

The household brands generally make small, relatively inexpensive devices for residential use only, not suitable for a school environment. It is vital to support any performance claims with independent scientific testing carried out by respected laboratories.

Hospital-grade air purifiers will cost more, but you get what you pay for. When considering the capital cost, schools should also think about the ongoing costs. Air purification units typically consume the equivalent of a fridge freezer. Further substantial savings can be made on energy (and associated carbon emissions) from closing windows and not having to heat fresh air intake. With energy costs currently sky high, the ongoing savings can quickly offset the initial capital cost of the air purifiers.

As EIC is in a unique position to present a number of experts in indoor air quality solutions and monitoring, I would like to bring to your attention two of our leading Members in this area namely Rensair and ACOEM who would like the opportunity to speak in more detail on these issues, and would welcome any opportunity to speak with department officials which EIC would be willing to help facilitate. We would be grateful if you could advise how we could facilitate this.

To assist your Department officials the following video case studies demonstrate the use of Rensair in schools:

- [Rensair Solves King's College School Wimbledon Air Purification Challenges](#)
- [Rensair Air Purification is the Science-based Choice for Lytchett Minster School](#)

Key features and benefits:

- **High performing** - greater than 99.97% efficacy. Traps and kills.
- **Large capacity** - powerful fan cleans up to 560m³/hour.
- **Cost-effective** - a fraction of the cost of a new HVAC system, low power usage and further energy savings from avoiding heating of outdoor air.
- **Multi-tasking** - traps viruses, bacteria, allergens, mould, pollen and more.
- **Instant to install** - simply 'plug and play', with long filter life (1 year+).
- **Auto function** - built-in particle counter adjusts airflow based on impurities in the air.
- **Low maintenance:** 9,000 hours (~1 year) of continuous run time before servicing.

- **Free consultation** - taking into account floor plans, existing HVAC systems, and occupancy rates

Complimentary to the above points, ACOEM UK Ltd have the ability to provide monitoring of CO2 and particles within classrooms in order to support the efficacy of Rensair and other air purification products and that these monitoring devices provided are capable of networking data via the cloud to provide the government with a record of how ventilation rates are being managed and improved by the deployment of such devices. This has assisted in the delivery of London Ultra Low Emission Zone and many of the Clean Air Zones across England and Low Emission Zones in Scotland.

EIC would welcome your feedback on these matters which I believe have significant bearing on the wellbeing and education of young people across the United Kingdom.

I look forward to your response.

Yours sincerely,

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