# Sustainable Schools June 11th, 2025 Webinar
# 2025 Report: Ontario's Top Energy Performing School Boards – Question and Answer Document

## Webinar Sponsor:

Dynamic Energy Services Inc.

**Does the white paper include the actual top-quartile energy target values? These are useful for benchmarking schools.**

- Yes, it does.

**Great to see a general increase in savings. Do those numbers include expanding Districts?**

- Yes, they do. The year-on-year savings (and savings potential) are based on all schools reporting in the year in question (2022-23 for this report). Many of the boards are expanding.

**Did either of your school boards alter the filter types to reduce energy?**

- Nick Pare (DCDSB): There was a government mandate after COVID hit that we were to go to MERV13 filters, so we did go that route. This past year we have been piloting a different kind of filter that lasts a little longer. The idea is that it reduces the environmental impact of throwing away filters when they are still good. Our custodians change the filters, so it is less filter changes for them. We are still going through the pilot so for energy savings, it is something we are monitoring and have in the back of our mind, but we don't have the results yet. We are keeping in mind that if you are replacing filters with ones that stay in for a longer time how are those loading? How is that affecting your equipment? Are your VFDs making up for extra static pressure?
- Graeme McKenzie (DSBN): We went to MERV13 as well per the guiding documents from the province. We are still using quite a few HEPA filters in classrooms where required or where asked for by onsite staff. And we know we are taking some penalties on energy use for that, but it keeps people comfortable and happy in their environments.

**Are the new filters still MERV 13 rating?**

- Nick Pare (DCDSB): Yes, they are still MERV13.

**Who do you use for recommissioning and how do you maintain it?**

- Graeme McKenzie (DSBN): About 10 years ago, we really focused on cost savings. So we drove through energy audits and focused on electricity savings for the first 5-7 year period, with LED lighting specifically, and we continue to do those projects. Where possible I try to align LED lighting and recommissioning into a single capital project, that way we get the energy savings and the cost savings at the same time. Because of that we were able to hold our utility budget almost flat for 10 years. Now that we have justified the cost savings of energy management, we are focusing on energy reduction and specifically on natural gas reduction. This is where the recommissioning activities come into play. The scope of work for a recommissioning activity was developed through best practices and some guiding documents. I designed the program with feedback from capital and maintenance as far as where they saw the worst performing mechanical systems and biggest issues out there. For the detailed scope of work, we first and foremost look at exhaust fans and backdraft dampers, making sure we close holes in our buildings. We remove fans that are no longer needed and repair where necessary. Then we get into doing a full test and balance to ASHRAE calculated outside air flow rates. I do most of the calculations. We don't do demand control ventilation yet but are looking at that for future phases of the project. We use average occupancy rates for single zones or combined for multi zone systems. Then we actually test the outdoor air CFM at the system to ensure we are meeting the minimum requirement during the occupied period. We found a ton of opportunities just through calibration of sensors, valves and dampers. There wasn't one system that was perfect. We've done full sensor replacements for those that are too far out of calibration.

**BAS Scheduling: Is this done centrally, locally or a mix of both?**

- Graeme McKenzie (DSBN): BAS Scheduling is controlled centrally in the Energy department with coordination with the Maintenance department.
- Nick Pare (DCDSB): All BAS scheduling is done centrally.

**When did you start to change schedules and mixed air levels back to pre Covid settings?**

- Graeme McKenzie (DSBN): We reverted to pre-COVID schedules and ventilation rates in Fall of 2024. We are confident that we are meeting minimum outside air standards, with test and balance provided to ensure all mechanical equipment is responding to the digital control signals. In most cases, we're reducing the outside air found to be above required ASHRAE levels. Schedules are adjusted quarterly for community use permits.
- Nick Pare (DCDSB): During the 2022-2023 school year, we began gradually shortening schedules and decreasing outside air levels, though they had not returned to pre-COVID settings. The 2024-2025 school year is the first year that both schedules and outside air levels have been restored close to pre-covid settings.

**I think we are looking at the same filter provider, has it been positive so far?**

- Nick Pare (DCDSB): We've seen mostly positive results. Every quarter, we test filters at five schools to check pressure drop, and so far, all are within acceptable limits. Our newer air handlers and rooftop units have "dirty filter" alarms, and none have gone off. Although a few filters in large units showed bending, the supplier replaced them for free. We're keeping an eye on everything to confirm that this is a long-term solution.

**Has people counting been considered to control DCV?**

- Graeme McKenzie (DSBN): We have not considered people counting equipment for DCV. Most of our facilities are multi-zone equipment. Where it is single-zone, we typically supply return air duct CO2 sensors to control outdoor air damper positions.
- Nick Pare (DCDSB): We have not yet considered people counting. All DCV is currently controlled by $CO_2$.