EDMONTON PUBLIC SCHOOLS

Information Report

Date	April 28, 2026
To	Board of Trustees
From	Ron Thompson, Superintendent of Schools
Subject	Division Energy and Environment Strategy Update
Originator	Cliff Richard, Chief Infrastructure and Technology Officer
Resource Staff	Todd Burnstad, Erin Cook, Andrea Ducharme, Terri Gosine, Geoff Homes, Darryl Kaminski, Ernest Kwan, Andrew Lowerre, Maegan Lukian, Coreen Moccia, Carrie Rosa, Rob Tarulli, Christopher Wright
References	Division Energy and Environment Strategy 2023–2026 Division Energy and Environment Strategy Update (October 2024)

ISSUE

The Division's Energy and Environment Strategy guides work related to environmental stewardship through continual improvement and modeling best sustainability practices. In 2023, the Board of Trustees approved the Energy and Environmental Strategy Update and Emissions Reduction Targets recommendation report to set greenhouse gas emissions reduction targets of five per cent by 2025 and 45 per cent by 2035. Administration worked with expert consultants to develop an action plan to achieve the targets, and provides updates to the Board of Trustees on the sustainability initiatives conducted across the Division, as well as progress made in relation to the overall reduction targets.

KEY POINTS

- The Division continues to make strong headway on the initiatives outlined in the Division's Energy and Environment Strategy.
- Division emissions have decreased by approximately seven per cent from the base year of 2021 and by approximately 16 per cent from 2017.
- The Division successfully achieved and surpassed our inaugural emissions reduction target of five per cent by 2025.
- Division emissions continue to trend downward despite increasing student numbers, the addition of new schools into the Division's inventory, and increased school utilization across the Division.
- Communication efforts, such as Division News stories, social media campaigns and media pitches have helped to profile initiatives and positive outcomes taking place across the Division.

BACKGROUND

An important early contributor to the Division's environmental sustainability work was the City of Edmonton's Corporate Climate Leaders Program (CCLP), a program to support member organizations in reducing greenhouse gas emissions and increasing climate resiliency. The Division joined the CCLP in 2021 in response to a Board motion and, as required by the program, set emission reduction targets of five per cent by 2025 and 45 per cent by 2035.

In spring 2025, the City of Edmonton announced the discontinuation of the CCLP program due to the evolving needs of the business community, the existence of other City-led benchmarking and improvement programs, as well as existing Edmonton networks around energy performance and sustainability. A transition to these alternative networks with a wider reach are supporting CCLP members and their emissions reduction goals.

As a result, the EnviroMatters Office has been evaluating other program and networking opportunities to support the Division's existing strategy. In 2024, the Division joined the national EcoSchools Canada Board Program to support and supplement the certification efforts of our schools. This program is similar to the CCLP in that it encourages member organizations to lead by example and develop and maintain strategic plans for sustainability and emissions reductions. The EcoSchools Canada Board Program allows the Division to concentrate efforts into a well-established, national program that is geared towards school boards and has a wide reach for networking and learning opportunities. The Division also became a member of the Green Economy Canada (GEC) network to continue our work on a formal platform, with a local and national hub. Green Economy Canada had managed the CCLP program for the City of Edmonton since 2020 and several members of the CCLP have transitioned into the GEC program to continue leading these initiatives.

Despite these changes in programming and supports, the Division continued to work towards its emissions reduction target of five per cent by 2025 and will now focus collective efforts on the target of 45 per cent by 2035. The Division's Energy and Environment Strategy continues to serve as a roadmap and framework for the Division's sustainability efforts and is updated periodically to reflect new initiatives, technologies and investment opportunities.

CURRENT SITUATION

Initiatives

A number of initiatives further the Division's efforts to reduce emissions. Outlined below is a brief summary of some of the key initiatives from the Division's emissions reduction plan over the past two years:

- Capital investment in energy efficiency and sustainability
  - In spring 2023, the Board of Trustees approved an initial $2 million allocation of capital reserve funding in support of the Division's Energy and Environment Strategy, with an additional $6 million targeted for future years.
  - Work completed during the 2024–2025 school year included increasing the Division's solar energy generation capacity with 378 kilowatts of combined solar installations on W. P. Wagner and Londonderry schools. These sites are estimated to generate 367,000 kilowatt hours (kWh) per year, equivalent to the electrical consumption of 52 Alberta homes, saving an estimated $76,000 per year.
  - Light emitting diode (LED) lighting upgrades were completed at Parkview, John D. Bracco, Hazeldean and Riverbend schools, with estimated savings of 171,000 kWh, or $32,000, per year for all four sites. An additional project involving stairwell lighting retrofits at the Centre for Education is currently underway.
  - Re-commissioning and retro-commissioning of building systems in six schools was initiated to improve energy efficiency. This work aims to optimize integrated systems, resulting in reduced costs and emissions while extending building system lifespans.
  - Water cooler energy conservation measures installed at Hardisty school are informing the possible expansion of the initiative to other sites.

- Infrastructure formed a new joint EnviroMatters Office and Integrated Infrastructure Services (IIS) Environmental Project Committee to strategically allocate additional approved capital reserve funds toward impactful energy and environment initiatives.
  - The committee has been working to develop and prioritize initiatives to maximize savings and emissions reductions. Early initiatives include technical investigations to inform the expansion of solar installations in the Division, as well as a study on window film and window upgrade technologies. Additional work includes dedicated staff on building controls and scheduling to maximize savings, as well as investigating opportunities for power quality filtration.

- Target Infrastructure Maintenance and Renewal (IMR) and Capital Maintenance and Renewal (CMR) funds toward energy efficiency
  - Energy efficiency initiatives completed:
    - The 2024–2025 funding year saw the completion of $2.4 million in CMR-funded projects with energy efficiency benefits. Key improvements included window replacements, lighting enhancements and roofing installations. Significant upgrades were also made to boiler systems to boost overall building performance.
    - Additionally, $2 million in IMR funding supported projects that advanced energy efficiency. This investment covered roofing and window installations, heating, ventilation and air conditioning (HVAC) and lighting upgrades, and the modernization of mechanical controls to ensure more efficient facility operations.
  - Planned energy efficiency initiatives:
    - For the 2025–2026 period, $11.7 million in CMR funding is earmarked for large-scale upgrades that will help to enhance energy efficiency. The plan focuses on comprehensive roofing projects, window and lighting upgrades, and the design and implementation of new boiler systems.
    - An additional $5.4 million IMR investment is planned for critical site updates that will also enhance energy efficiency. These funds target roofing replacements, new window installations and HVAC improvements, alongside the integration of updated mechanical control systems for better energy management.
  - These investments directly address sustainability by modernizing the physical and mechanical infrastructure of our facilities. Such initiatives contribute to energy savings as follows:
    - Building envelope, roofing and windows: the building envelope acts as a barrier against the elements. Modern roofing provides higher thermal resistance (R-values), preventing winter heat loss and summer overheating. Similarly, new multi-pane windows with low-emissivity coatings reduce thermal transfer, lowering the load on heating and cooling systems.
    - Lighting enhancements: upgrading to LED lighting is a high-return investment that reduces energy consumption by 50 to 70 per cent. Beyond direct savings, LEDs emit very little heat compared to traditional bulbs. This decrease in ambient heat further reduces the energy required to cool the building during warmer months.
    - HVAC and boiler system upgrades: heating and cooling are a school's largest energy expenses. Modern condensing boilers operate at over 90 per cent efficiency, far surpassing older units. Additionally, HVAC modernizations using variable speed drives optimize motor performance, extending equipment life while achieving 30 to 40 per cent energy savings.
    - Mechanical controls and automation: Energy Management Systems prevent waste by ensuring equipment only runs when necessary. Centralized, networked systems automatically control

boilers and lighting. By optimizing equipment scheduling and enhancing occupant comfort, these automated controls can increase overall building energy efficiency by 15 to 30 per cent.

- School builds and solar energy
  - Until recently, Alberta Infrastructure mandated a minimum Leadership in Energy and Environmental Design (LEED) Silver certification for new school buildings. The Province is now requiring that new school infrastructure meets the National Energy Code of Canada for Buildings (NECB) Tier 1 standard, which is focused on energy performance. Recent new construction projects managed by Alberta Infrastructure will incorporate many of the learnings and best practices gained from previously certified LEED construction projects without the formal certification.
  - The Elder Dr. Francis Whiskeyjack school project was designed and built to achieve LEED Silver certification, using sustainable practices and energy-efficient systems. The facility opened in fall 2025 and is currently awaiting certification.
    - Key features include a high-performance building envelope for energy efficiency, optimized daylighting, natural ventilation and the use of local materials with low-emission finishes.
  - There are presently 20 LEED Silver and 12 LEED Gold certified schools in the Division.
  - The Division prioritizes sustainable materials and design in all renovation and construction projects.
  - There are presently 26 schools with Division-led solar installations, which provide alternative energy to the schools and serve as teaching and learning tools for students.
  - The combined Division-led solar initiatives from 2018–2025 are expected to generate approximately 5,800 megawatt hours (MWh) of electricity in 2026 and save an estimated $730,000 per year.
  - These solar installations are expected to generate about seven per cent of the Division’s electricity consumption, or that of about 830 Alberta homes per year.
  - Administration continues to work with consulting engineers to identify additional candidate sites for future solar installations.
- Align the Division Capital Plan with emissions reductions
  - Infrastructure continued efforts to integrate sustainability metrics into planning systems.
  - Major modernization priorities are ranked using utility data (gas and electricity) from the EnviroMatters Office, deferred maintenance dollar values based on the condition of major systems, and investment in preventative and on-demand maintenance. These measures help ensure that the Division’s carbon footprint is a contributing factor in the ranking of major modernization priorities.
  - New construction priorities also serve to reduce the Division's carbon footprint by bringing families and students closer to home with new schools in new and rapidly-developing areas in the city. Bus ride times are shortened or eliminated and active transportation to these sites becomes more feasible. Placing students in newer buildings can allow the Division the flexibility to replace, consolidate, modernize or right-size existing facilities since utilization is reduced.
  - Under the provincial construction process, the Division continues to advocate for sustainable structures and aims to reduce emissions through energy efficiency measures and solar installations, where possible.
  - To further support sustainable construction efforts, the EnviroMatters Office is investigating utilizing EnergyStar Portfolio Manager scores, which would provide planning systems with additional sustainability metrics and calculations, such as weather-normalized energy consumption, and water usage.
- Building energy audits, deep energy retrofit and heat pump studies
  - In 2025, the Division successfully applied to the Alberta Ecotrust Retrofit Accelerator program for free coaching services to help building owners and managers make sustainable upgrades through deep energy retrofits. These retrofits go beyond individual upgrades and take a whole-building approach to reduce emissions, energy consumption and operating costs.

  - Energy benchmarking and Level 1 energy audits were completed for all Division sites to inform areas of focus for future efficiency measures. Work is underway with Alberta Ecotrust to explore detailed Level 2 energy audits for high energy consuming sites.
  - To explore the possible decarbonization of schools in the future, the Division initiated a heat pump study with a portion of the Division approved funds identified for energy efficiency. Administration is currently working with consultants on the study to dive deeper into core aspects of deep energy retrofit pilot projects.
- Electrification and fuel reduction efforts
  - In summer 2025, the EnviroMatters Office worked with IIS grounds crews on a cordless electric tool pilot, which includes batteries and chargers for mowers, blowers, trimmers and chainsaws. Learnings from the pilot will be used to potentially expand the program to other tools and areas.
  - The Division is currently working with expert consultants on a maintenance vehicle fleet fuel review for possible efficiencies, including investigating routing efficiencies, Global Positioning Systems (GPS) and scheduling as well as electric vehicle charging infrastructure. The goal is to investigate strategies for fuel consumption reductions, expand learnings to other areas and explore an electric vehicle roadmap.
- Targeted energy reduction and behaviour change strategy
  - Infrastructure continued to work on consultant-recommended pathways for behaviour change through awareness initiatives and best practices, including:
    - Developing annual multimedia communications campaigns to raise awareness about new Division resources for staff and students, including energy conservation posters and checklists as well as guides to support sustainability conversations in schools.
    - Investigating energy behaviour audits to develop a baseline and overarching picture of the range of energy efficiency behaviours currently in place so that future use patterns in Division buildings can be informed and influenced.
    - Gamification (adding game-like elements, contests and competitions) of existing initiatives, like the annual Earth Day Lights Out Challenge, to motivate energy efficiency behaviour.
  - Work has begun to expand on targeted energy reduction through building optimization efforts, upgrades and retrofits. The goal is to set energy savings targets through the year and over holiday periods by utilizing the Division Environmental Dashboard data and results from Level 1 audits to identify high-consuming sites, investigate causes and develop solutions.
  - Additional efforts include evaluating HVAC controls and scheduling to maximize efficiency, through the EnviroMatters Office and IIS Environmental Project Committee.
- Technology
  - Technology and Information Management (TIM) is currently piloting an enterprise management solution to manage Smartboards and other interactive displays remotely across the Division in an effort to conserve energy and reduce power consumption costs. The phased approach involves trialing and scaling the solution progressively across schools and different types of devices.
  - TIM continues to support the rollout of ChromeOS devices across the Division. The approximately 1,200 ChromeOS devices deployed thus far provide an estimated annual savings of 20,000 kWh as compared to the desktop units they replaced.
- Expansion of the EcoSchools program
  - The 2024–2025 school year was another successful year in the program, with 10 schools being certified and an additional 12 schools participating. The Division achieved its goal to have 60 schools registered in the program.

  - Certifications received:
    - Brander Gardens, Elmwood, Greenfield, Hillcrest, Patricia Heights and W.P. Wagner schools each received Platinum.
    - Dovercourt and Shauna May Seneca schools each received Gold.
    - Academy at King Edward School received Silver.
    - Sweet Grass School received Bronze.
  - The Division continued to pilot the new EcoSchools Canada Board Program, which offers a suite of supports and resources for school boards across Canada, and joined the EcoSchools Program Advisory Committee, which is a team of school board representatives who offer insight and expertise to enhance the EcoSchools program, ensuring effective support for schools and school boards across the country.
  - The goal is to grow annual EcoSchools registrations to over 70 schools through 2026 and continue to build awareness through Division channels like Division News, storytelling series and internal messaging. Future plans include exploring partnerships with other school Divisions in Alberta for cross-promotion and storytelling to increase engagement.
- Electricity procurement strategy and renewable energy
  - Work was completed to shift the Division's electricity procurement strategy to better control costs by unbundling retail billing services from long-term electricity prices. The Division realized savings of $1.26 million in fiscal year 2024–2025 from this strategy.
  - In 2025 the Division began the process to procure renewable electricity to further reduce the Division's emissions for the 2025 target year.
  - 4,375 MWh of wind energy was procured from British Columbia's Bear Mountain Wind Park, offsetting the Division's emissions by nearly 2,000 tonnes.
  - In 2026, Administration will begin investigating future purchases of renewable energy in alignment with our new electricity procurement strategy.
- Reduced impact and green procurement practices
  - Increasingly, the Division is addressing sustainability in procurement processes by adding sustainability criteria to Requests for Proposals (RFPs) in numerous areas, including student bus transportation, technology equipment, waste disposal and cleaning products, to ensure that vendors align with the Division's sustainability goals. Embedding these criteria helps the Division evaluate vendor commitments, reduce emissions and achieve more sustainable long-term outcomes.
  - In spring 2026 the EnviroMatters Office coordinated sustainable procurement professional development training for staff in several key departments to help integrate sustainability into procurement processes and decision-making.
  - Future plans for this initiative include prioritizing work with environmentally responsible vendors and products, reducing emissions in the supply chain, investigating circular practices and developing a sustainable procurement strategy for the Division.
- Building capacity and the sustainability team
  - The EnviroMatters Office is continuing efforts to enhance sustainable education and training in the Division, including courses for staff through the Division professional development portal.
  - A two-day solar training course was provided for Division staff in spring 2026 and included inspection, troubleshooting and proactive solar maintenance. Hard copy training manuals were developed to support the staff and additional digital resources will be explored to support ongoing learning.
  - Other potential professional development courses being considered for staff include core concepts in energy management, as well as building optimization and commissioning essentials.

- Staff and student engagement
  - Infrastructure worked to engage with principals through the Infrastructure and Energy and Environment Principal Advisory Committees to better understand what initiatives and resources could be enacted to change behaviours towards sustainability.
  - The EnviroMatters Office staff attended several Climate Change and School Gardening Summits organised by the Bennett Centre to directly engage with teachers and students and support schools in their sustainable projects.
  - The EnviroMatters Office held an information and engagement session at the annual IIS professional development day in spring 2025. The goal was to connect with IIS staff in a meaningful way to share information and collect feedback on how to inspire sustainable action among maintenance staff groups.
- Water conservation
  - Water conservation is an important sustainability measure and the Division has investigated initiatives including automated water conservation devices for urinal flushing, low flow faucets and sensor faucets as well as other conservation measures under previous LEED school builds and energy performance contracts.
  - Water conserving cooling towers and high efficiency domestic hot water heaters have also been installed in select schools, with regular maintenance and inspection of flush valves to reduce wasted water.
  - Leak and flood detection systems have been installed at over 20 schools, with additional schools being added each year. These systems provide early detection of major water leaks and also minor toilet and tap leaks.
  - Water conservation is also addressed at the school level through behaviour change initiatives like rain barrels and rainwater harvesting for school gardens as well as various actions in the EcoSchools program.
  - Between 2018–2019 and 2024–2025, the Division's total consumption of water has been on a mild downward trend. When factoring in the significant student enrolment growth across the Division over this period, water consumption on a per-student basis has been reduced by 26 per cent.
- Waste diversion and organics collection program expansion
  - In spring 2025, the next stage in expanding the organics collection program was initiated at nine high schools and sites began collecting organics in fall 2025. Only a few months into the program, most schools at least doubled their average waste diversion rates and some schools saw even greater results:
    - McNally School diversion rates increased from four per cent to 31 per cent.
    - Queen Elizabeth School diversion rates increased from five per cent to 20 per cent.
    - Ross Sheppard School diversion rates increased from 14 per cent to 42 per cent.
  - All organics collection pilot sites that started the program in spring 2024 have continued to see annual improvements in waste diversion rates.
  - Expanding the organics collection program in 2026, focused on Division sites that have existing sorting stations and that produce high levels of organic waste (sites with cafeterias, commercial kitchens and Career and Technology Studies foods programs) to maximize diversion rates.
  - In spring 2026, nine additional schools joined the program. To date there are 33 sites participating in organics collection, with plans to add all remaining high schools by the end of 2026. Future work includes consulting with internal stakeholders and service providers to develop a Division-wide strategy to onboard all remaining Division schools, in a phased approach.

- Since the program began in 2024, over 330 tonnes of organic waste have been diverted from the landfill, and Division-wide waste diversion rates increased from 24 per cent in 2023 (prior to the organics and sorting station pilot) to over 30 per cent in 2025.
- In fall 2025, the Division expanded the City of Edmonton Reuse Centre pilot to collect and divert reusable items from schools and further support waste reduction and diversion initiatives. In the future, this initiative will consider expanding the collection to administrative sites. The EnviroMatters Office also continues to participate in the City of Edmonton Waste Reduction network to explore opportunities to expand waste diversion and reduction initiatives.

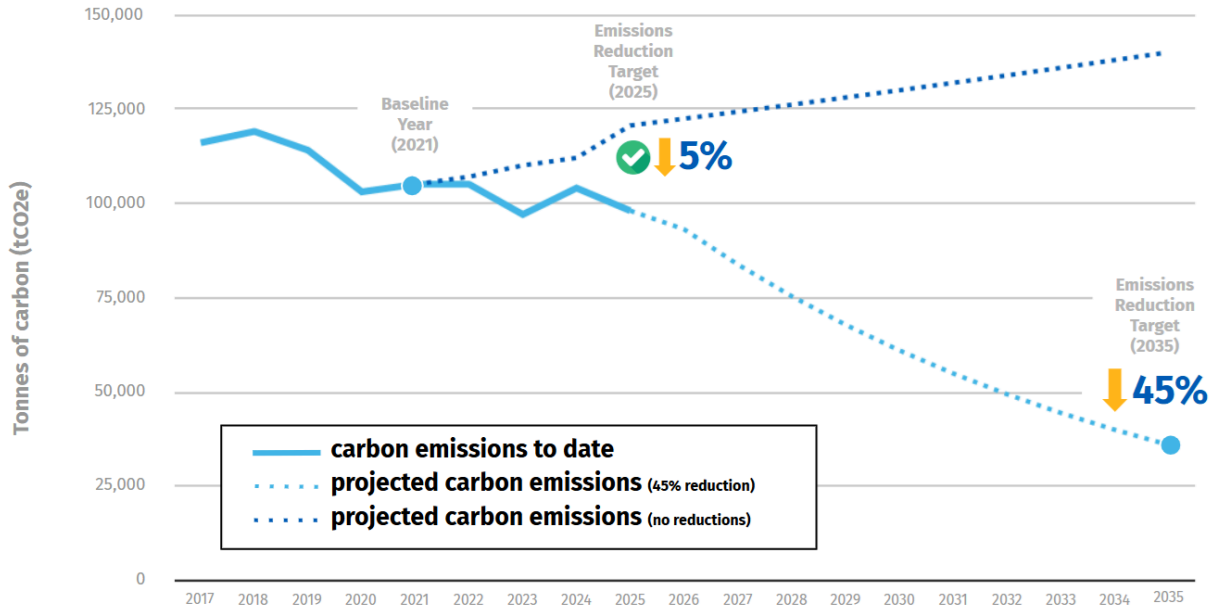
- Electronics recycling and resale
  - Over the 2024–2025 school year, the Division's electronic recycling and reuse program recovered over 117,000 pounds of resources through recycling and reused over 2,800 assets.
  - The Division also benefited from a $43,000 rebate from electronics resales, which was reinvested in classroom technology.
- Upgraded Environmental Dashboard
  - Following the initial release of the Division's internal Environmental Dashboard, version 3.1 was developed based on feedback received from the Infrastructure Principal Committee members and other internal stakeholders. New features include:
    - Refreshed user interface: updated colors to match standardized sorting station colours.
    - Solar charts: the size of solar installations is now shown, along with links to a map of solar array locations across the Division and energy production portals.
    - Organics charts: organic waste volumes are shown for participating sites.
    - Chart downloads: historic utility chart data can be downloaded for teaching and learning.
    - Build year: the year of building construction is now displayed.
    - Building address: site addresses link to Google Map aerial views.

Emissions Totals and Target Results

Edmonton Public Schools' 2025 carbon footprint represents a continuing improvement against both 2024 and the year the Division started annual reporting in 2017, with total emissions decreasing by approximately 16 per cent from 2017. Factoring in enrolment growth over the same period, emissions on a per-student basis have been reduced by approximately 20 per cent from 2017 to 2025.

For target setting, the baseline year selected was 2021 and total emissions have decreased by approximately seven per cent from the baseline year to 2025. The Division has successfully achieved and surpassed the first emissions reduction target of five per cent by 2025 and will continue to build momentum leading up to the next target year in 2035.

The graph below highlights the Division emissions footprint from 2017 to 2025. Totals are rounded to the nearest whole number and are subject to annual recalculations, which can impact previous years (including baseline years) due to improvements in data collection, changed emission factors or calculation methodologies and identification of additional emissions sources.



In general, emissions reductions in 2025 can be attributed partially to a decrease in equipment fuel (natural gas) combustion due to a mild winter as well as ongoing upgrades to high efficiency boilers. Contributing factors also include increased solar generation and the purchase of renewable electricity, as well as ongoing energy efficiency, fuel reduction and waste diversion measures. It is important to note that there may be annual fluctuations in Division emissions from year to year due to weather or necessary recalculations; however, the goal is to see a long-term overall trend downwards in emissions regardless of fluctuations from year to year.

Results for the 2025 target year are noteworthy, especially regarding consumed electricity (which decreased by 10 per cent from the previous year) and natural gas use (which decreased by seven per cent from the

previous year). Student transportation emissions have, however, increased by approximately 14 per cent from the previous year, due to enrolment growth.

Of particular note is that Division emissions continue to trend downward despite increased student numbers, the addition of new school facilities into the Division's inventory, and increased area utilized within schools. Since the baseline year of 2021, student enrolment has increased from approximately 106,000 to over 122,000, Division-wide instructional space utilization has increased from 80 per cent to 90 per cent, and four new schools have been opened (Dr. Anne Anderson, Garth Worthington, Joey Moss and Elder Dr. Francis Whiskeyjack).

Renewable energy continues to be an important source of grid emissions reductions. Compared with the previous year, the Division's solar generation increased by 7.4 per cent (about 70 per cent was self-consumed and the remainder exported to the grid). Total Division renewables in 2025 include:

- Generated solar energy: 5,145 MWh
- Purchased wind energy offsets: 4,375 MWh

Edmonton Public Schools is a member of the Instep (Carbon and Sustainability Programme) in order to support efforts to track emissions reductions accurately. The Division has received an Instep Gold certification status for emissions reductions achieved in 2025. Instep offers certification at Bronze, Silver, Gold, or Platinum levels based on performance. Gold Certification is a high-level recognition awarded to organizations demonstrating achievement in measuring, managing, and reducing carbon emissions. It signifies a commitment to sustainability and reporting, involving verified reductions in emissions, positioning the Division as a leader in environmental sustainability.

Communications Strategy

Many of the strategies around emissions reductions require sustaining awareness around behaviours and actions that help to reduce the Division's environmental impact. Over the 2024–2025 school year, the Communications department worked with the EnviroMatters Office on educating and building momentum and excitement among staff about sustainable practices. Some key campaigns that were part of the communications strategy include:

- Supporting the annual push to increase EcoSchools program participation.
- Updating the Environmental Dashboard as well as the Environmental Sustainability internal Connect page and hub for the Division's energy and environment work.
- Creating regular storytelling features to shine the light on staff and students who are doing interesting work or inspiring others to reduce their carbon footprint.
- Supporting work to promote the Environmental Dashboard.
- Developing resource materials and communications to support the sorting station and organics collection program, awareness about unexpected energy usage, and the Annual Earth Day Lights Out Challenge.
- Coordinating social media campaigns and media pitches to showcase sustainable initiatives in the Division, both centrally and in schools.

ML:jl