



REPORT TO

## REGULAR BOARD

## NET ZERO UPDATE (ALL WARDS)

*"I can do all things through HIM who strengthens me."  
Philippians 4:13 (NRSVCE)*

Created, Draft	First Tabling	Review
November 10, 2020	November 19, 2020	

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## RECOMMENDATION REPORT

**Vision:**

*At Toronto Catholic we transform the world through witness, faith, innovation and action.*

**Mission:**

*The Toronto Catholic District School Board is an inclusive learning community uniting home, parish and school and rooted in the love of Christ.*

*We educate students to grow in grace and knowledge to lead lives of faith, hope and charity.*



Brendan Browne, PhD  
Director of Education

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Associate Director of Facilities,  
Business and Community  
Development, and  
Chief Financial Officer

## **A. EXECUTIVE SUMMARY**

This report provides an update on the path towards Net Zero and creation of a conservation culture at TCDSB.

Consultation has been curtailed by the COVID-19 crisis, however workshops with the Environment Committee and Facilities staff have taken place, resulting in some recommendations for specific immediate actions. The Board has also benefited from participation in the *Green Will Initiative*, a City of Toronto program arising from the mayor's Climate Challenge, to drive public and private sector building portfolios across Toronto to net zero emissions. Through this program, which is still in early stages, TCDSB receives notification of and assistance with applications for available incentives for energy and greenhouse gas reduction projects.

With partial assistance from a Natural Resources Canada (NRCan) incentive (for one project), retro-commissioning and upgrading of building systems has been completed or is underway in several schools. A significant portion of School Renewal funding has been spent or committed in 2019-2020 to upgrade heating and ventilation equipment and controls in schools. These projects will result in greater efficiency and reductions in energy use, greenhouse gas emissions and utility costs.

The report has been reviewed by the Environment Committee and recommends that the Board sign the Participation Agreement for the City of Toronto *Green Will Initiative*, included as Appendix A.

***The cumulative staff time required to prepare this report was 12 hours.***

## **B. PURPOSE**

- At the Corporate Services, Strategic Planning and Property Committee meeting on September 12, 2019 the Board committed to the creation of a conservation culture At TCDSB.*** A consultation process and next steps were outlined in the report regarding the third party Net Zero Energy Study. This report provides an update to the Board of Trustees on the progress of the consultation and steps towards the goal of energy conservation and ultimately net zero emissions.

## **C. BACKGROUND**

1. *A study carried out by the Research in Architecture Studio noted that the reduction of greenhouse gas emissions is the critical concern in addressing climate change.* The study, presented to the Board in September 2019, concluded that net zero emissions, rather than net zero energy, is a more achievable target and that creation of a “conservation culture,” with sustained effort from a host of people, including external partners, over a period of years, even decades, is essential for success.
2. *The Board’s Energy Conservation and Demand Management (ECDM) Plan outlines a short-term goal for energy conservation.* The Board has retained Enerlife Consulting Inc. to monitor progress on targeted energy reductions outlined in the five-year ECDM Plan approved by the Board on June 6, 2019 and to provide an annual progress report. The Board allocated \$2M in the 2019-2020 School Renewal Plan for energy reduction projects identified in the ECDM. The actual expenditure to date is \$1.91M for projects at six (6) schools.

## **D. EVIDENCE/RESEARCH/ANALYSIS**

1. *Consultation has been curtailed by the COVID-19 crisis, however meetings with the Environment Committee and Facilities staff have taken place as follows:*
  - Presentation to the Environment Committee meeting on September 20, 2019 with discussion of consultation on the creation of a conservation culture. Four sub-committees were formed to carry out in-depth consultation over the next year: (i) Energy Sub-committee; (ii) Curriculum Sub-committee; (iii) Resources Sub-committee; and (iv) Partnerships Sub-committee.
  - Consultation workshop held with approximately 40 Facilities staff (Operations, Maintenance, Capital Development, Asset Renewal) on September 27, 2019. A detailed summary of the feedback from this workshop is included in Appendix B. The general themes for action were:
    - Education and communication to increase awareness;
    - Involve students;
    - Enhance curriculum;

- Dedicated Energy Conservation staff/department;
  - Incentives for conservation;
  - Building assessment and retrofits;
  - Revise standards for new buildings;
  - Training of staff;
  - Funding.
2. ***Immediate specific action items arising from the Facilities workshop that staff are investigating or implementing are as follows:***
- a. Carry out blower door tests/infrared scans of selected schools;
  - b. Retain a consultant to develop a new energy efficient building standard;
  - c. Group Renewal projects at schools and look for opportunities to include energy use reduction measures such as caulking, weatherstripping and increased insulation;
  - d. Track energy savings from Renewal projects;
  - e. Provide energy use data displays in schools;
  - f. Build life cycle costing case for additional Capital/Renewal funding;
  - g. Involve and empower caretakers and trades to share knowledge with staff in schools.
3. ***In September, 2019, the Director of Education and the Chair of the Board attended the launch of the mayor's Climate Challenge.*** Coincidentally with the completion of the Net Zero Research Study, the City of Toronto invited the TCDSB along with other major public and private sector organizations to join in the mayor's Climate Challenge, a five-year program of benchmarking, auditing, retro-commissioning, Capital retrofit planning and long-term strategic planning to move the City towards net zero emissions (see Appendix C).
4. ***The Green Will Initiative (GWI) is a City of Toronto program arising from the mayor's Climate Challenge, to drive public and private sector building portfolios across Toronto to net zero emissions.*** Participation in this partnership will provide access to the City's Better Building Navigation and Support Services to help identify projects, formulate business cases, explore incentive, grant and financing solutions and measurement and verification.

5. ***The Board has already begun to reap the benefits of the GWI partnership through assistance in obtaining Natural Resources Canada (NRCan) funding for retro-commissioning.*** The City's Green Will staff made Board staff aware of the NRCan incentive which pays for 50% of the cost of commissioning existing buildings, up to \$40,000, to identify inefficiencies in building system operations and recommend remedial work and installation of new technology to reduce energy consumption and greenhouse gas emissions. assisted in completion of the application for this funding. The GWI team helped identify a suitable project and assisted with completing the application. Incentive funding was awarded for a retro-commissioning project at St. Oscar Romero based on the potential for significant energy savings.
6. ***TCDSB Operations and Maintenance staff will be participating in an Energy Efficiency for Building Operators (EEBO) training program, delivered by the Canadian Institute for Energy Training.*** This training session is being facilitated exclusively for operators of buildings in Toronto that are participating in GWI. The EEBO training program is a hands-on and highly interactive two-day course designed to engage, motivate, and empower building operators and maintenance staff. Over two days, December 1-2, 2020, instructors will facilitate participant understanding of how energy behaves, how energy is used in their facility, and how it can be controlled through operational action across a variety of building systems.
7. ***The City has requested participants in the GWI to sign a Participant Agreement to confirm commitment to the initiative.*** A copy of the agreement, to be signed by the Board's signing authorities (Chair or Vice-chair and Director or Associate Director), is included as Appendix A. The agreement has been reviewed by legal and facilities staff, who recommend signing as a demonstration of the Board's commitment to net zero goals. The agreement does not commit the Board financially in any way. ***The key component of the agreement is the Participant's acknowledgement that the success of the Green Will Initiative is dependent on the Participant's commitment to:***
  - (a) work with the City to develop *Pathway to Net Zero Plans*, including the establishment of goals and action items, to bring its building portfolio to net zero GHG emissions;
  - (b) initiate the action items outlined in the *Pathway to Net Zero Plans* developed by the City and the Participant;

- (c) provide access to information, data and findings to verify the progress of the action items outlined in the *Pathway to Net Zero Plans* and the performance of each building;
  - (d) work cooperatively with the City, other Green Will Initiative participants, and key Stakeholders; and
  - (e) work towards having their building portfolio meet the City's *TransformTO* goal of net zero greenhouse gas emissions by 2050.
8. ***In addition to one project receiving NRCan incentive funding, retro-commissioning and upgrading of building systems has been completed or is underway in several schools.*** \$22M of School Renewal funding has been spent or committed to upgrade heating and ventilation equipment and controls in schools. These projects will result in greater efficiency and reductions in energy use, greenhouse gas emissions and utility costs.
9. ***Construction standards for TCDSB new schools will include a requirement for thermal scanning.*** Specifications for the St. Bruno/St. Raymond and St. Leo replacement schools, to be issued for tender shortly, include this new requirement, which detects areas of air leakage during construction that can they be addressed to ensure that the building envelope is as tight as possible. This is a critical factor in reducing energy use for heating and cooling. Blower door testing may also be employed to test air-tightness at completion of construction.
10. ***Two new positions have been created in the Capital Development and Sustainability Department – A Sustainable Built Environment Supervisor and a Sustainable Built Environment Officer.*** Funded by the School Renewal Allocation, these two new staff will focus on the implementation of retrofit/equipment upgrade projects that will reduce energy consumption and greenhouse gas emissions and on updating our building standards to support moving towards net zero carbon in new schools.
11. ***The Board resolution on September 2020 to have bicycle racks installed at all TCDSB schools, and take other measure to encourage cycling to school, is a step along the path to net zero emissions.*** While initiated as a COVID-19 response, the long term impact will hopefully be to reduce the number of school busses and cars taking students to school, thereby reducing emissions. An aggressive program to install the bike racks at the schools that do not have them, and increase the number of racks at larger schools, is well underway.

## **E. IMPLEMENTATION, STRATEGIC COMMUNICATIONS AND STAKEHOLDER ENGAGEMENT PLAN**

1. Stakeholder consultation on the development of energy reduction targets needs to continue. In December, 2019, the Communications Department created a Net Zero page on the Board website to share information and resources with all stakeholders at the following link:

<https://www.tcdsb.org/Board/environment/NetZero/Pages/default.aspx>

2. The City of Toronto has created a website to showcase the Green Will Initiative and listing participants, including the TCDSB:

<https://greenwillto.ca/our-participants/>

It is expected that information about the goals, actions and results of the various participants will be available on this website in the future.

3. Current action items related to the Green Will Initiative have been identified as follows:

- Review and execute Participant Agreement Nov. 19, 2020
- Form Net Zero Team Nov. 30, 2020
- Draft Pathway to Net Zero Plan Feb. 28, 2021
  - Provide details on Energy Policy and Energy Team
  - Building Portfolio short and long term goals, performance targets and action plan
- Intake process for buildings to enrol into GWI Mar. 31, 2021
  - Select buildings to be enrolled
  - Energy data to baseline (24 months of utility data including all energy sources for each building enrolled)
  - Share capital and maintenance plans of buildings enrolled
- Provide list of projects to highlight on GWI website Mar. 31, 2021
  - Include details like project scope, costs, savings and benefits



4. This update report has been reviewed by the Environment Committee. The staff recommendation is endorsed by the Committee.

## **F. STAFF RECOMMENDATION**

That the Board execute the Participation Agreement for the City of Toronto *Green Will Initiative* included as Appendix A.