


June 2024

York Catholic District School Board
2024-2029 Energy Conservation and
Demand Management Plan

Senior management approval

I confirm that York Catholic District School Board's senior management has reviewed and approved this 2024-2029 Energy Conservation and Demand Management Plan.

Signature:  _____

Name: _____ Khaled Elgharbawy _____

Date: June 28, 2024

Title: Superintendent of Facilities Services and Plant

Under Ontario Regulation 25/23, Ontario's broader public sector organizations are required to develop and publish an Energy Conservation and Demand Management (ECDM) Plan by July 1, 2024. Technical advice and analysis for this ECDM Plan were provided by [Enerlife Consulting Inc.](#)

For additional information regarding this document, please contact:

Khaled Elgharbawy, B. Eng, Marine Eng, CBCP. CSEP
Superintendent of Facilities Services and Plant
York Catholic District School Board
Tel. (905) 713-1211 Ext 12387
Email: khaled.elgharbawy@ycdsb.ca

Table of Contents

- Senior management approval..... 1
- Part 1: Introduction 3
 - 1. Regulatory requirements 3
 - 2. About York Catholic District School Board 3
 - 3. Education sector background 3
- Part 2: Results from the past 5 years (2019-2023) 6
 - 1. Board’s asset portfolio 6
 - 2. Board’s energy use data 6
 - 3. Review of previous energy conservation goals and achievements 7
 - 4. Measures implemented in 2019-2023..... 12
 - 5. Renewable energy generation and other technologies 12
- Part 3: The plan for the next 5 years (2024-2029)..... 14
 - 1. Future energy conservation goals 14
 - 2. Energy efficiency measures 15
 - 3. Other information 15
 - 4. Appendix: Investments in Energy Efficiency between Fiscal Year 2020 and Fiscal Year 2023
16

Part 1: Introduction

1. Regulatory requirements

[Ontario Regulation 25/23](#): Broader Public Sector: Energy Reporting and Conservation and Demand Management Plans requires Broader Public Sector (BPS) organizations to develop an Energy Conservation and Demand Management (CDM) plan and update it every five years. Our updated CDM plan was developed in compliance with the regulation.

The horizon for this plan is the 5-year period from 2024 to 2029, prioritizing projects and organizational improvements which are manageable within this period.

2. About York Catholic District School Board

Operating in the York Region, York Catholic District School Board (YCDSB) has a portfolio of 86 elementary and 16 secondary schools.

YCDSB is committed to a sustainable future and has made significant efforts towards reducing the impact of its facilities on the environment, while ensuring occupant comfort. YCDSB has undertaken projects aimed at lowering energy use and improving facility operations. Board staff work diligently to operate and maintain building systems as efficiently as possible with the available resources.

YCDSB continues to be actively involved with the Ministry of Education, the Ministry of Energy, Ontario's Independent Electricity System Operator (IESO), the Catholic School Boards Services Association (CSBSA), the Ontario Educational Cooperative Marketplace (OECM), and Enbridge Gas as well as electricity distribution companies to voice concerns and provide input into the development of guidelines and programs beneficial to all school boards.

YCDSB has consistently ranked in the top 10 of most energy efficient school boards in Ontario in the annual Sustainable Schools rankings throughout the past 5 years.

The Board's Environmental Services Department is dedicated to providing leadership in the areas of Energy Management and Conservation, Waste Management and Recycling, and Office Services at the York Catholic District School Board.

3. Education sector background

Each year school boards receive approximately \$1.4 billion school renewal funding from the province. In addition, school boards may receive time-limited funds over this period. The Ministry typically announces each Board's funding allocations, for the upcoming school board Fiscal Year (September 1st to August 31st), in March-April. While a board may have a five-year energy management strategy, the ability to implement their strategy depends on the funding that's received for each of the five years covered by their plan.

The education sector is unique in that a board's asset portfolio can experience important changes that crucially impact a board's energy consumption over a five-year period. The following is a list of some of the most common variables and metrics that change in the education sector.

Facility variables:

- Construction
 - Year built
 - Number of floors
 - Orientation of the building
- Building Area
 - Major additions
 - Sites sold/closed/demolished/leased
 - Portables
 - Installed
 - Removed
 - Areas under construction
- Equipment/Systems
- Age
- Type of technology
- Lifecycle
- Percentage of air-conditioned space
- Site Use
 - Elementary school
 - Secondary school
 - Administrative building
 - Maintenance/warehouse facility
 - Community Hubs
- Shared Site Use (For example: two or more boards share common areas and/or partnered with a municipality)
 - Swimming pools
 - Libraries
 - Lighted sports fields
 - Sports domes

Other Variables:

- Programs
 - Childcare
 - Before/After School Programs
 - Summer School
 - Community Use
 - Outdoor ice rinks

- Occupancy
 - Significant increase or decrease in number of students
 - Significant increase in the hours of operation
 - New programs being added to a site
- Air Conditioning
 - Significant increase in air-conditioned space
 - Portables

Part 2: Results from the past 5 years (2019-2023)

1. Board's asset portfolio

The following table outlines the energy-related variables and metrics in the Board's asset portfolio that changed from the baseline Fiscal Year 2018/2019 to the end of the five-year reporting period Fiscal Year 2022/2023.

Table 1 Board's asset portfolio

| Key Metrics | (Baseline Year) Fiscal Year 2018/2019 | Fiscal Year 2022/2023 | Variance |
|---|--|-----------------------|-----------|
| Average Daily Enrolment (ADE) | 52,365.00 | 46,692.95 | -5,672.05 |
| Average Operating Hours | 52.00 | 80.00 | 0 |
| Total Number of Buildings | 99 | 99 | 0 |
| Number of Buildings Sold/Demolished | 0 | 0 | 0 |
| Total Floor Area of Buildings Sold/Demolished | 0 | 0.00 | 0 |
| Number of Buildings Closed | 0 | 0 | 0 |
| Total Floor Area of Buildings Closed | 0 | 0 | 0 |
| Total Number of Portables | 115 | 116.00 | 1 |
| Total Number of Portapaks | 0 | 0 | 0 |
| Total Portable/Portapak Floor Area (ft ²) | 241,682.23 | 241,152.00 | -530.23 |
| Total Building Area (includes portables and portapaks) (ft ²) | 7,601,328.50 | 7,501,570.50 | -99,758 |

2. Board's energy use data

In Ontario, 25% to 35% of energy consumption for a facility is affected by weather.

To demonstrate the effect of weather, the following table shows the Weighted Average Heating Degree Days (HDD)¹ and Cooling Degree Days (CDD)² for the six most common Environment Canada weather stations in the Ontario education sector.

¹ Heating Degree Day (HDD) is a measure used to quantify the impact of cold weather on energy use. In the data above, HDD are the number of degrees that a day's average temperature is below 18C (the balance point), the temperature at which most buildings need to be heated.

² Cooling Degree Day (CDD) is a measure used to quantify the impact of hot weather on energy use. In the data above, CDD are the number of degrees that a day's average temperature is above 18C, the temperature at which most buildings need to be cooled. It should be noted that not all buildings have air conditioning and some building have partial air conditioning. The UCD only applies CDD to meters that demonstrate an increase in consumption due to air conditioning.

Table 2 Ontario degree-days

| Ontario Degree Days | Fiscal Year 2017 to 2018 | Fiscal Year 2018 to 2019 | Fiscal Year 2019 to 2020 | Fiscal Year 2020 to 2021 | Fiscal Year 2021 to 2022 | Fiscal Year 2022 to 2023 |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| HDD | 3989 | 4196 | 3837 | 3696 | 3799 | 3,611 |
| CDD | 432 | 334 | 415 | 392 | 340 | 267 |

The best way to compare energy usage values from one year to another is to use weather normalized values as they take into consideration the impact of weather on energy performance and allows an “apple-to-apple” comparison of consumption across multiple years.

However, a straight comparison of Total Energy Consumed between one or more years does not take into consideration changes in a board’s asset portfolio, such as changes in buildings’ features, and newly implemented programs which will greatly impact energy consumption.

As a result, weather normalized Energy Intensity³ is the most accurate measurement that allows the evaluation of a board’s energy use from one year to another as it cancels out any change in floor area. The unit of measurement used is either equivalent kilowatt hours per square foot (ekWh/ft2) or equivalent kilowatt hours per square metre (ekWh/m2).

The following table lists the board’s raw and weather-normalized energy consumption values for Fiscal Year 2018/2019 and Fiscal Year 2022/2023.

Table 3 Board’s energy use data

| Utility | FY2018/2019 | FY2022/2023 | Variance |
|---|----------------|----------------|------------|
| Total Electricity (kWh) - raw | 51,590,320 | 45,656,560 | -5,933,760 |
| Total Natural Gas (ekWh) - raw | 57,361,660 | 54,132,680 | -3,228,980 |
| Total Energy Consumed (ekWh) - raw | 108,952,000 | 99,789,250.00 | -9,162,750 |
| Energy Intensity (ekWh/ft2) - raw | 14.33 | 13.30 | -1.03 |
| Total Electricity (kWh) - weather normalized | 50,672,120 | 46,979,330 | -3,692,790 |
| Total Natural Gas (ekWh) - weather normalized | 52,139,800 | 60,156,790 | 8,016,990 |
| Total Energy Consumed (ekWh) - weather normalized | 102,811,900.00 | 107,136,100.00 | 4,324,200 |
| Energy Intensity (ekWh/ft2) - weather normalized | 13.53 | 14.28 | 0.76 |

3. Review of previous energy conservation goals and achievements

In the previous 2019 ECDM plan, YCDSB aimed to achieve an energy intensity reduction of 1.25 ekWh/ft2 over 5 years, for an 8.86% decrease in energy intensity, by fiscal year 2022 to 2023.

³ Energy Intensity (known as EI) is the quantity of total energy consumed divided by the total floor area. EI is typically expressed as equivalent kilowatt hours per square foot (ekWh/ft2), gigajoule per square metre (GJ /m2), etc., depending on the user’s preference.

The following table compares the energy intensity conservation goal with the actual energy intensity reduction for each year.

Table 4 Comparison of energy intensity conservation goal and actual energy intensity reduction

| Fiscal Year | Energy Intensity Conservation Goal ekWh/ft ² | Energy Intensity Conservation Goal Percentage | Actual Energy Intensity Reduction ekWh/ft ² | Actual Energy Intensity Reduction Percentage |
|--------------|---|---|--|--|
| 2018 to 2019 | 0.25 | 1.76% | 0.52 | 3.72% |
| 2019 to 2020 | 0.26 | 1.85% | 0.92 | 6.82% |
| 2020 to 2021 | 0.27 | 1.90% | -0.50 | -3.93% |
| 2021 to 2022 | 0.25 | 1.76% | -0.85 | -6.51% |
| 2022 to 2023 | 0.22 | 1.59% | -0.12 | -0.85% |

NOTE TO READERS:

When reviewing energy use trends compared to targets, the following should be considered:

- The board's conservation goals were forecast in 2019 based on the assumption that operational parameters would remain consistent from FY2019 through FY2023. However, the pandemic that arrived in early 2020 significantly changed how schools operated and impacted their energy consumption.
- As a result of significant operational changes from one year to the next from FY2019 to FY2023, an apple-to-apple comparison of Energy Intensity (ekWh/ft² – the quantity of energy consumed per area) is not possible.
 - Factors that reduced energy consumption include:
 - temporary school closures in FY2020 and FY2021, due to the pandemic
 - temporary suspension of community use of schools, before/after school programs, childcare programs, continuing education and summer school programs
 - Factors that increased consumption include:
 - Implementation of new health and safety factors in FY2021 through FY2023 to address pandemic issues, such as:
 - increased ventilation (intake of fresh air),
 - increased filtration requirements
 - expanded operating hours of HVAC equipment

A board's ability to achieve their 2019 forecasted Conservation Goals may be limited by some or all the above factors.

In addition to the pandemic-related factors outlined above, there are a number of other factors that regularly impact a board's ability to achieve their conservation goals, including:

Before and After School Programs

Before-School and After-School Programs need a facility's Heating, Ventilation, and Air Conditioning (HVAC) system to operate for an extended period of time on a daily basis, which increases the overall energy intensity.

Community Use of Schools

Both indoor and outdoor school space is available to not-for-profit community groups at reduced rates, outside of regular school hours. The use of spaces in schools, typically gymnasiums and libraries, has increased over time. The use of these spaces during non-school hours requires a facility's HVAC system to operate for an extended period on a daily basis, which will increase the overall energy intensity.

Community Hubs

Many schools now offer a greater range of:

- events (cultural),
- programs (arts, recreation, childcare), and
- services (health, family resource centres).

The dramatic increase in community use means that many schools now run from 6:00 a.m. until 11:00 p.m. during weekdays and are open many times on weekends. The use of these spaces during non-school hours requires a facility's HVAC system to operate for an extended period on a daily basis, which will increase the overall energy intensity.

Air Conditioning

Historically, schools have not had air conditioning, or it has been a minimal space in the facility. However, with changing weather patterns, "shoulder seasons" such as May, June and September are experiencing higher than normal temperatures and there is an increased desire for schools to have air conditioning. Air conditioning significantly increases a facility's energy use, specifically electricity consumption.

Compliance with current Ontario Building Code (OBC)

When renovations or an addition is built onto an existing school, in-place equipment such as HVAC systems, lighting etc., may be required to meet current OBC standards which may result in increased energy use.

For example, under the OBC, buildings built today have increased ventilation requirements, meaning more outside air is brought into a facility. As a result, HVAC systems need to work longer to heat or cool the outdoor air to bring it to the same temperature as the standard indoor temperature for the building.

Pandemic

When reviewing year-over-year value, it should be noted that FY2020 values will be lower as schools were closed due to the pandemic (March 2020 until June 2020). During that time, the sector saw a decrease of 16% in electricity consumption and 3% in natural gas consumption. The difference in the percentage for the two utilities, reflects that natural gas is primarily used for heating and April, May and June do not have the same heating demands due to weather.

In FY2021 consumption values were typically higher than FY2020, but due to limited occupancy as a result of the ongoing pandemic, lower than previous consumption levels.

Ventilation and Filtration

In consultation with the Office of the Chief Medical Officer of Health, the Ministry of Labour, Immigration, Training and Skills Development and others, school boards have been expected continue to build on established practices to optimize air quality to support healthy and safe learning environments for students and staff.

Many of these new recommendations/requirements can impact utility consumption. For instance, the implementation of standalone HEPA filtration units has impacted energy consumption, primarily electricity.

3.1 HEPA filtration units at YCDSB

High-Efficiency Particulate Air (HEPA) filters are essential for maintaining clean air in indoor environments by trapping airborne particles, including dust, pollen, and pathogens. All YCDSB classrooms have been equipped with institutional-grade HEPA filtration units. The board maintains approximately 3,049 HEPA units to enhance air cleaning in every occupied classroom, portable, and resource room, as well as other instructional spaces that do not have mechanical ventilation (library, cafeteria, and gymnasium).

The table below summarizes estimated annual electricity consumption of the board's 3,049 HEPA units for a range of average operational hours per week.

Table 5 Estimated annual electricity consumption of YCDSB's HEPA filters

| Average Hours per week | Estimated Annual Consumption (kWh/year) |
|------------------------|---|
| 40 | 658,584 |
| 60 | 987,876 |
| 80 | 1,317,168 |

3.2 Cumulative energy conservation goal

The following table compares the 2019 forecasted cumulative energy intensity conservation goal with the actual cumulative energy intensity reductions.

Table 6 Cumulative energy intensity goal from Fiscal Year 2018 to 2019 through Fiscal Year 2022 to 2023

| Analysis of Cumulative Conservation Goals | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | Cumulative Value |
|---|--------|--------|--------|--------|--------|------------------|
| Actual Weather Normalized Variance in Annual Energy Intensity from previous FY (ekWh/ft ²) ("+" value = EI decreased ; "-" value = EI increased) | 0.52 | 0.92 | -0.50 | -0.85 | -0.12 | -0.02 |
| Weather Normalized Annual Energy Intensity as a % reduced ("+" value = EI decreased ; "-" value = EI increased) | 3.72 | 6.82 | -3.93 | -6.51 | -0.85 | -0.75 |
| 2019 Forecasted Annual Energy Intensity Conservation Goal (ekWh/ft ²) (from 2019 5-year energy plan) | 0.25 | 0.26 | 0.27 | 0.25 | 0.22 | 1.25 |
| 2019 Forecasted Annual Energy Intensity Conservation Goal (%) (from 2019 5-year energy plan) | 1.76 | 1.85 | 1.90 | 1.76 | 1.59 | 8.86 |

| Analysis of Cumulative Conservation Goals | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | Cumulative Value |
|--|---------------|---------------|---------------|---------------|---------------|-------------------------|
| Weather Normalized Variance between Actual Annual Energy Intensity and 2019 Forecasted Annual Energy Intensity Conservation Goal (ekWh/ft2) ("+"value = exceeds forecast; "-" value = below forecast) | 0.27 | 0.66 | -0.77 | -1.10 | -0.34 | -1.27 |
| Analysis of Cumulative Conservation Goals | | | | | | |
| Board's 2019 Forecasted Cumulative Energy Intensity Conservation Goal FY2019 to FY2023 (ekWh/ft2) | | | | | | 1.25 |
| Board's 2019 Forecasted Cumulative Energy Intensity Conservation Goal FY2019 to FY2023 (%) | | | | | | 8.86 |
| Actual Cumulative Weather Normalized Energy Intensity Conservation Goal that was achieved (ekWh/ft2) ("+" value = EI increased ; "-" value = EI decreased) | | | | | | -0.02 |
| Weather Normalized Variance between Actual and 2019 Forecasted Cumulative Energy Intensity Conservation Goal (ekWh/ft2) ("+"value = exceeds forecast; "-" value = below forecast) | | | | | | -1.27 |
| % of Cumulative Energy Intensity Conservation Goal Achieved | | | | | | -1.77 |

4. Measures implemented in 2019-2023

A list of the measures implemented, the related costs, and the fiscal year that the measure was implemented within the Board are outlined in the Appendix: Investments in Energy Efficiency between Fiscal Year 2020 and Fiscal Year 2023.

Important Consideration - It takes a minimum of one full year after an energy management strategy has been implemented before an evaluation can measure the related actual energy savings achieved.

5. Renewable energy generation and other technologies

5.1 Solar photovoltaics (PV)

A total of 8 YCDSB schools have solar PV systems owned by the school board on school rooftops, with an installed capacity of 115 kilowatts (kW), generating 59 megawatt-hours (MWh) of electricity in 2022-2023 school year.

Table 7 Installed capacity of solar PV systems owned by YCDSB

| School | Size (kW) |
|-----------------------------|------------|
| Cardinal Carter | 10 |
| St Gregory the Great | 24 |
| Father Michael McGivney | 10 |
| Our Lady Queen of the World | 6 |
| Our Lady of the Lake | 24 |
| St Jean De Brebeuf | 1 |
| St Maximilian Kolbe | 5 |
| St Monica | 35 |
| Total | 115 |

A further 22 schools have solar PV systems not owned by the board (roofs are leased). Total installed capacity of these systems is 2,211 kW.

5.2 Other technologies

At YCDSB, no facilities currently utilize air-source or water-source heat pump technology and there are no current plans to add such technologies. The following YCDSB facilities utilize ground source heat pump (GSHP) technology:

1. Christ the King CES
2. Good Shepherd CES
3. Light of Christ CES

4. Our Lady of the Annunciation CES
5. Prince of Peace CES
6. St. Bernadette CES
7. St. Clare CES
8. St. Monica CES
9. St. Patrick (Schomberg) CES
10. York Catholic Education Centre (GHSP/Conventional - boiler supplements heat pump loop)

YCDSB does not utilize solar thermal preheat in its facilities at this time.

Part 3: The plan for the next 5 years (2024-2029)

1. Future energy conservation goals

The Board has set out the following energy intensity reduction conservation goals for the next five fiscal years.

Table 8 Annual energy intensity conservation goals

| Annual Energy Intensity Conservation Goal | Fiscal Year 2023 to 2024 | Fiscal Year 2024 to 2025 | Fiscal Year 2025 to 2026 | Fiscal Year 2026 to 2027 | Fiscal Year 2027 to 2028 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| ekWh/ft ² | 0.33 | 0.40 | 0.46 | 0.35 | 0.29 |
| Percentage Decrease | 2.47% | 3.01% | 3.43% | 2.60% | 2.19% |

The following table shows the Board’s cumulative energy intensity conservation goal for the next five fiscal years.

Table 9 Cumulative conservation goal

| Cumulative Conservation Goal | Fiscal Year 2023 to 2024 through Fiscal Year 2027 to 2028 |
|------------------------------|---|
| ekWh/ft ² | 1.82 |
| Percentage Decrease | 13.70% |

2. Energy efficiency measures

For the Board's relevant projects over the next five years, please refer to workbook **Calculating Energy Conservation Goals (FY2024 through FY2028) - YCDSB**.

3. Other information

3.1 Environmental programs

In Fiscal Year 2022 to 2023, schools within the Board participated in environmental programs such as EcoSchools. YCDSB schools have been active participants in EcoSchools Canada program over the past 5 years. Currently, 17 YCDSB schools are EcoSchools-certified.

3.2 Energy efficiency incentives

The Board applies to incentive programs to support the implementation of energy efficient projects on a regular basis and maintains close working relationships with IESO and Enbridge representatives to assist in maximizing available funding.

3.3 Energy procurement

The Board continues to participate in the Ontario Educational Cooperative Marketplace (OECM) Strategic Electricity Management and Advisory Services. The Board also participates in Catholic School Board Services Association (CSBSA) Natural Gas Procurement Initiative.

3.4 Demand management

1. The Board uses the following method(s) to monitor electrical Demand:

- Invoices
- Real-time data
- Online data from the Local Distribution Company (LDC)

2. The Board uses the following methodologies to cut down electrical Demand:

- Equipment scheduling
- Phased/staged use of equipment
- Demand-limit equipment
- Deferred start-up of large equipment (e.g. chiller start-up in spring)

4 Appendix: Investments in Energy Efficiency between Fiscal Year 2020 and Fiscal Year 2023

Fiscal Year 2020

| Category | School | Project Description – Fiscal Year 2020 | Cost | Progress % |
|-----------------------------|---|--|----------------------|------------|
| HVAC | All Saints | Replace atmospheric boilers | \$398,500.00 | 100% |
| HVAC | Divine Mercy | Replace atmospheric boilers | \$17,640.00 | 100% |
| HVAC | St. Emily | Replace atmospheric boilers | \$18,990.00 | 100% |
| HVAC | Various schools | Coil cleaning | \$235,400.00 | 100% |
| HVAC BAS | Various schools | ALC | IAQ separate funding | 100% |
| HVAC BAS | Various schools | Delta Controls | IAQ separate funding | 100% |
| HVAC BAS | Various schools | Reliable | IAQ separate funding | 100% |
| | | | | |
| Masonry, walls & structures | Fr. Bressani | Cladding the exterior, north elevation | \$682,994.60 | 95% |
| Masonry, walls & structures | Fr. Bressani | Wall repairs interior, 2 rooms | Complete | 100% |
| Masonry, walls & structures | O.L. of the Rosary | Caulk expansion joints | \$75,775.00 | 100% |
| Masonry, walls & structures | St. Anthony | Masonry repairs | \$103,415.34 | 100% |
| Masonry, walls & structures | St. David | Efflorescence on exterior walls | | 100% |
| | | | | |
| Roof | St. Augustine | Remainder of roof, north area | \$1,233,862.82 | 100% |
| Roof | St. Bernadette 2021-63-T | All areas | \$2,330,696.65 | 100% |
| Roof | St. Mark roof and wall cladding 2021-65-T | south/west and metal wall cladding | \$893,152.00 | 100% |
| Roof | St. Mary Immaculate 2021-65-T | All areas | \$799,489.60 | 100% |
| Roof | St. Patrick Markham 2021-66-T | All areas | \$954,735 | 100% |
| | | | | |
| Windows & Doors | Cardinal Carter | Clear story/exterior doors | Hold | |
| Windows & Doors | Fr. John Kelly | Replace exterior windows | CVRIS | |
| Windows & Doors | St. Brother Andre | Design window replacement | Hold | |

Fiscal Year 2021

| Category | School | Description of project - Fiscal Year 2021 | Total PO \$ | Project Status |
|---------------------------------------|----------------------------|--|-------------|----------------|
| Electrical | | | | |
| Electrical | various | main switches/service | - | completed |
| Electrical | St. Augustine | Ground service/duct replacement | - | completed |
| HVAC | | | | |
| HVAC | Holy Jubilee | Replace atmospheric boilers | 761,134 | completed |
| HVAC | St. Agnes of Assisi | Replace atmospheric boilers | 582,509 | completed |
| HVAC | St Jean de Brebeuf | Replace AC in 3 Lan Rooms | | completed |
| HVAC | Various Schools | Feasibilities assessment & design | - | 0.00% |
| HVAC | Various Schools | Coil Cleaning | - | 0.00% |
| HVAC-BAS | Various | ALC | 137,328 | completed |
| HVAC-BAS | Various | Delta Controls | 106,166 | completed |
| HVAC-BAS | Various | Reliable Controls | 24,063 | completed |
| HVAC-BAS | Various | Bas Contingency | - | completed |
| LED Lighting | | | | |
| LED Lighting | Our Lady of the Lake | Attrium HID -LED | 9,998 | completed |
| Metering | | | | |
| Energy Metering | Various | Real time metering infrastructure - Electric & Gas water | - | 0.00% |
| Sub-Metering | Various Karma sub-Metering | Upgrades, Monitoring & Waste Control | - | 0.00% |
| Masonry Walls & Structural | | | | |
| Masonry Walls & Structural | Fr. Bressani CHS | Cladding over exterior walls, Phase II design only | 37,375 | Design |
| Masonry, Walls & Structural | Our Lady of the Rosary | Expansion joints caulking Elevator | 8,475 | completed |
| Roof | | | | |
| Roof | Blessed Trinity (solar) | Replace all sections | 2,188,577 | completed |
| Roof | Divine Mercy (solar) | Restore all areas | 1,479,110 | completed |
| Roof | Fr. Henri Nouwen (solar) | Replace all areas | 1,133,192 | completed |
| Roof | Our Lady of Hope | All of main building | 1,155,143 | completed |
| Roof | St. Anne CES | Replace all roofs | 1,508,550 | completed |

Fiscal Year 2022

| Category | School | Description of project – Fiscal Year 2022 | Total PO \$ | Project Status |
|---------------------------------------|-----------------------------|--|--------------|----------------|
| HVAC | | | | |
| HVAC | Various Schools | Re-Commissioning, Feasibilities, assessment & design | \$0.00 | 80.00% |
| HVAC | St. Clare | Design Work for 2024 HVAC Upgrade | \$98,690.81 | completed |
| HVAC-BAS | Various | ALC | \$0.00 | completed |
| HVAC-BAS | Various | Delta Controls | \$0.00 | completed |
| HVAC-BAS | Various | Reliable Controls | \$0.00 | completed |
| HVAC-BAS | Various | Bas Contingency | \$0.00 | 0.00% |
| Water Treatment | Various | Water Treatment | \$128,000.00 | completed |
| HVAC-RTU | Our Lady of the Rosary | Library RTU | \$23,108.50 | 20.00% |
| HVAC | Our Lady Queen of the World | Replace condenser Pipes on cooling tower due to corrosion + pump replacement/rebuild | | 20.00% |
| HVAC-RTU | St Mary Immaculate | 3 RTU's north section | \$32,171.10 | 20.00% |
| HVAC | St Joan of Arc | Chiller Replacement | \$56,189.25 | 40.00% |
| HVAC | Divine Mercy | Boiler Replacement | \$481,224.34 | 95.00% |
| HVAC | St. Emily | Boiler Replacement | \$641,475.94 | 95.00% |
| HVAC | Our Lady of the Lake | Boiler Replacement | \$875,750.00 | completed |
| HVAC | Light of Christ | Heat Pump Replacement | \$31,922.44 | completed |
| LED Lighting | | | | |
| LED Lighting | St. Monica | Non-Linear Lighting Conversion | \$9,978.47 | completed |
| Metering | | | | |
| Energy Metering | Various | Real time metering infrastructure - Electric & Gas water | \$0.00 | completed |
| Sub-Metering | Various Karma sub-Metering | Upgrades, Monitoring & Waste Control | \$0.00 | completed |
| Masonry Walls & Structural | | | | |
| Masonry Walls & Structural | St Brother Andre | Annex Building Siding Repairs | \$58,760.00 | completed |
| Masonry Repairs | St. Clare | Masonry repairs | | completed |
| Roof | | | | |

| Category | School | Description of project – Fiscal Year 2022 | Total PO \$ | Project Status |
|---|-----------------------------|--|----------------|----------------|
| Roof | Sir Richard Scott (Solar) | Replace A1 Main building (Postponed from 2022) | \$870,291.53 | completed |
| Roof | Our Lady Queen of the World | Replace 50% of roof section C1 | \$1,039,662.15 | 95.00% |
| Roof | St Joseph Aurora | Full Roof Replacement | \$1,546,461.50 | completed |
| Roof | St. Brother Andre | Roofing Repairs | | completed |
| Roof | St. Robert | Portable E Repairs | | completed |
| Roof | Various | Assessment & design | \$8,588.00 | completed |
| Windows, Doors & Maintenance | | | | |
| Door Replacement | Various Schools | Replacement of doors | | 0.00% |
| Door Replacement | St. Emily | Replacement of various doors | \$19,560.30 | completed |
| Skylight Renewal/Replacement | Fr Michael McGivney | Refurbish/replace skylights over main foyer & Greenhouse | \$396,681.13 | completed |

Fiscal Year 2023

| Category | School | Description of project – Fiscal Year 2023 | Project Status |
|------------------------------------|--------------------|--|----------------|
| Design/Condition Assessment | | | |
| Design/Condition Assessment | Various | Re-Commissioning, Feasibility studies, assessment & design | 0.00% |
| Design/Condition Assessment | St. Joan of Arc | Condition Assessment of various retaining walls around the property | Completed |
| Design/Condition Assessment | Various | Investigate to determine if Reinforced Autoclaved Aerated Concrete was used (Ministry Requirement) | Completed |
| Design/Condition Assessment | St. Robert | Library Renovation Working Drawings/Design | Awarded |
| Condition Re-Assessment | Various | Pavement Condition Re-Assessment | 0.00% |
| Electrical | | | |
| Electrical | North & West | Main Switches/Service | 0.00% |
| Electrical | CEC | Galaxy UPS Battery Replacement | 20.00% |
| Electrical | CEC | Liebert UPS Battery Replacement | Awarded |
| HVAC | | | |
| HVAC | St. Thomas Aquinas | Boiler Replacement + Exhaust Fan Replacement | Design |
| HVAC | Notre Dame | Boiler Replacement | Tendered |

| Category | School | Description of project – Fiscal Year 2023 | Project Status |
|---|---------------------------|---|----------------|
| HVAC | St. Clare | Ground Source Heat Pumps - Ground to Air | Tendered |
| HVAC | St. Gabriel the Archangel | Replace Condensing Unit for School (50ton) + Child Care | Tendered |
| HVAC | St. Gregory the Great | Replace AC Units Serving Two Second Floor Rooms | Tendered |
| HVAC | Holy Spirit | AHU modification Serving School, Gym, Library, Office | Design |
| HVAC | Light of Christ | Replace Make-Up Air Unit Serving Original School Classrooms | Design |
| HVAC - BAS | | | |
| HVAC-BAS | Various | Building Automation Contingency/Upgrades | 0.00% |
| HVAC-BAS | Various | ALC | 70.00% |
| HVAC-BAS | Various | Delta Controls | 70.00% |
| HVAC-BAS | Various | Reliable Controls | 70.00% |
| LED Lighting | | | |
| LED Lighting | Fr Michael McGivney | Non-Linear Lighting Conversion | Tendered |
| LED Lighting | St. Augustine | Non-Linear Lighting Conversion | Tendered |
| Sub-Metering | | | |
| Energy Metering/Sub-Metering | Various | Real time metering infrastructure - Electric, Gas water | 0.00% |
| Masonry Walls & Structural | | | |
| Masonry Walls & Structural | St. Joan of Arc | Masonry Repairs to Spalling and Cracked Brick | completed |
| Roof Replacements | | | |
| Roofing | Holy Cross | Roof Replacement of Areas B3, B5, C1 & D2 | Tendered |
| Roofing | St. Patrick Schomberg | Roof Replacement of Areas of Addition | Tendered |
| Roofing | Father John Kelly | Roof Replacement of Roof Area A1 | Tendered |
| Roofing | St. Cecilia | Condensing Unit Sleeper Replacement | completed |
| Roofing | St. Brother Andre | Front Canopy Roof Replacement | Tendered |
| Windows, Doors & Maintenance | | | |
| Door Replacement | Various | Replacement of doors | 0.00% |
| Door Replacement | Our Lady of the Lake | Replacement of Various Exterior Doors/Frames | Design |
| Skylight Renewal/Replacement | Fr Michael McGivney | Main Skylight Refurbishment | Awarded |