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Town of Aurora
Information Report
PDS23-117

Subject: Corporate Environmental Action Plan: 2022 Progress Report

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Department: Planning and Development Services

Date: October 17, 2023

In accordance with the Procedure By-law, any Member of Council may request that this Information Report be placed on an upcoming General Committee or Council meeting agenda for discussion.

Executive Summary

The 2018 Corporate Environmental Action Plan (CEAP) is a five-year plan that outlines environmental sustainability action items directed to each Department for implementation. The CEAP is intended to protect and enhance the natural environment, promote environmental sustainability, integrity, and conservation of resources, and create a practice of environmental stewardship within the community. An annual progress report is presented to the Environmental Advisory Committee (EAC) and to Council. The success of CEAP is imperative to help the Town reach its GHG emission reduction goal of 80 per cent of 2018 levels by 2050.

- The CEAP 2022 progress report showcases the Town's actions towards environmental sustainability and supports Council's commitments to the environment.

Background

The 2018 Corporate Environmental Action Plan (CEAP) is a five-year plan intended to provide corporate direction on key strategic environmental initiatives. Created with the support and strategic guidance of the Environmental Advisory Committee (EAC), the establishment and implementation of the CEAP is a clear indication of Council's dedication to environmental stewardship and initiatives across the corporation.

The CEAP is intended to protect and enhance the natural environment, promote environmental sustainability, integrity, and conservation of resources, and create a practice of environmental stewardship within the community.

The CEAP was developed to assist Council in planning and implementing specific actions to improve the Town's environmental performance and sustainability for future generations. The success of the CEAP requires a coordinated approach that includes Town Departments driving implementation of initiatives and providing input and data on achievements to date.

The CEAP implements six (6) themes including water conservation, sustainable urban development, waste reduction and diversion, biodiversity and natural heritage, climate change and energy, and environmental awareness. Each theme consists of a series of objectives and action items, along with suggested timeframes for completion, that serve to build the Town's adaptive capacity to a changing climate, as well as promote environmental sustainability within daily operational activities.

Throughout the duration of this plan, there is a lag-time of one (1) year in terms of the collection and reporting of data. Ideally, reports are presented by mid-year for the previous reporting year. This timeframe allows staff to collect, verify, input and analyze all the data needed for tracking and reporting. Since the CEAP monitors facility energy consumption, utility bills often get adjusted or corrected and require additional time to finalize the data.

The progress report consists of a summary document, highlighting the achievements for 2022 (Attachment 1), and a separate tracking document, used by staff to monitor the progress of the action items. The tracking sheet is administered by the Energy & Climate Change Analyst, on an annual basis to monitor the Town's progress on the environmental objectives and action items established within the plan.

An annual progress report is presented to the Environmental Advisory Committee (EAC) and to Council and then posted on the Town's website for public view.

Analysis

The CEAP 2022 progress report showcases the Town's actions towards environmental sustainability and supports Council's commitments to the environment.

In 2022, the Town demonstrated excellence in implementing environmental sustainability within daily operations and strategies. Table 1 presents a highlight of the

Town’s 2022 successes from the CEAP progress report across the six (6) themes included in the plan.

Table 1: The Town’s 2022 Environmental Achievements Across CEAP Themes

Area of Focus	Completed Departmental Actions in 2022
Water Conservation	<ul style="list-style-type: none"> • The Town installed 1000 water meters, surpassing installations in 2021 by 104.2%. • The LSRCA conducted inspections of the Town’s stormwater pond inventory and reported deficiencies as applicable. • Design for the installation of a new oil and grit separator (OGS) unit, along the Murray Drive culvert, was completed. • Operations conducted seven OGS cleanouts and 1,682 catch basin cleanouts. Total disposal of waste gathered from cleanout activities equated to 105 tonnes, a 2.5% increase compared to 2021. • Engineering Division adopted Ontario Regulation 406/19, On-Site and Excess Soil Management Regulation, into design and construction tenders to improve the reuse of soils during Town construction projects. • Engineering Division adopted York Region’s Infiltration and Inflow (I&I) Standard to reduce I&I development on new sanitary sewers.
Sustainable Urban Development	<ul style="list-style-type: none"> • Engineering Division commenced a design project on the development of a wildlife crossing on Henderson Drive to address wildlife conservation considerations in this area. • Design of new sidewalk projects was undertaken along Edward Street and Industrial Parkway North, to continue to promote active transportation options for the community. • A community garden was planned as part of the construction of a new park in the 2C lands.
Waste Reduction and Diversion	<ul style="list-style-type: none"> • Frames and lids for catch basin and maintenance hole repairs were reused where possible. • The community waste diversion rate increased to 70%. • The Bag Tag program was implemented. A total of 3,560 bag tags were purchased generating over \$17,800.00 in revenue.

Area of Focus	Completed Departmental Actions in 2022
	<ul style="list-style-type: none"> Annual stewardship programs were implemented by the Town including eWaste, community cleanups, compost giveaways, community garage sales, and the blue box collection program.
<p>Biodiversity and Natural Heritage</p>	<ul style="list-style-type: none"> Second phase expansion of the David Tomlinson Nature Reserve, located in the 2C lands was undertaken. The second phase included trails, boardwalks, native plantings, and ecological features. Parks Division planted 1,933 trees, exceeding tree planting in 2021 by 1.72%. Online promotions were administered to the public to deter individuals from feeding wildlife on Town-owned property. The Town continued ongoing partnerships with residents/community groups to remove invasive species including garlic mustard and buckthorn.
<p>Climate Change and Energy</p>	<ul style="list-style-type: none"> The Climate Change Adaptation Plan was completed and endorsed by Council. The Green Development Standards Phase I was completed and endorsed by Council. A climate change lens was applied and included in the Town’s updated Official Plan. Fleet Division continued to upgrade their fleet with the purchase of more fuel and technologically efficient vehicles. Facility annual energy consumption (natural gas/electricity) totaled approximately 19,386,242 equivalent kilowatt-hours; a 2.3% decrease compared to 2021. A monthly building performance meeting undertaken with Facilities staff and the Energy and Climate Change Analyst, to discuss ongoing energy projects, operational changes, energy consumption, trends, best practices for energy conservation, new technologies, utility incentives etc. continued as an ongoing practice. The Town’s newly installed electric vehicle charging stations were involved in 1,300 charging sessions across the community. The Town’s electric vehicle chargers consumed

Area of Focus	Completed Departmental Actions in 2022
	approximately 12,244 kilowatt-hours of electricity. <ul style="list-style-type: none"> • The Town generated approximately 649,131 kilowatt-hours of electricity through its solar PV systems across four Town-owned facilities. • Facilities Division conducted a Building Condition Assessment study across all Town facilities, which also included energy conservation measures. • Council approved \$50,000 in the 2022 budget for capital projects involving energy conservation measures at Town facilities.
Environmental Awareness	<ul style="list-style-type: none"> • The Town partnered with York Region to share social media messaging related to water quality and conservation. • Aurora Chamber Street Festival included Enbridge Gas as a sponsor, providing information on the Home Energy Rebate Plus (HER+) and Home Winterproofing Program (HWP). • Parks Division promoted the adopt-a-park program to Town residents, an ongoing initiative, as well as supported the Arboretum planting and the planting of trees and shrubs.

Table 1 serves to provide a snapshot of the many avenues of success that was recognized in 2022 across the Town’s departments including Corporate Services, Finance, Operational Services, Community Services, and Planning and Development Services. The Energy & Climate Change Analyst is responsible for administering a tracking sheet to all departments to monitor environmental success and ensure that departments are on pace to meeting their respective objectives and action items outlined in the plan.

A more detailed list of environmental successes accomplished across the Town’s corporate sector in 2022 is available (Attachment 1).

Table 2: Energy Performance at Town Facilities: 2019-2022

Metric	Target by 2024	2019	2020	2021	2022	2024 Target Met?
GHG Emission Inventory (tCO2e)	3,144	3,549	2,854	2,632	2,591	YES

Metric	Target by 2024	2019	2020	2021	2022	2024 Target Met?
GHG Cumulative Reduction (Compared to 2018)	8.3%	3.2% Increase	17.3%	23.4%	24.7%	YES
GHG Cumulative Emission Reduction (Compared to 2018) (tCO ₂ e)	265	110 Increase	594	806	848	YES
Natural Gas Cumulative Reduction (Compared to 2018)	9.7%	3.3% Increase	14.5%	25.1%	26.4%	YES
Electricity Cumulative Reduction (Compared to 2018)	10.5%	9.2% Increase	13.3%	11.5%	20.6%	YES

Table 2 provides a summary-level analysis of the energy performance of Town-owned facilities. On a bi-monthly basis, the Energy & Climate Change Analyst reviews the utility data for each Town-owned facility and processes the bills through a monitoring sheet and onto RETScreen. RETScreen is a clean energy management software platform developed by the Government of Canada, that enables low-carbon planning, implementation, monitoring, and reporting. The utility data is transferred over to RETScreen where it is further subject to analysis. The results of the analysis for 2022 is included in Table 2 above, along with results from past years.

When looking at the data above, especially 2019, it is evident that both GHG emissions and energy consumption increased compared to 2018. From 2020-2022 the Town's

GHG emissions and energy consumption dramatically decrease. There are two factors explaining this:

1. COVID-19 forces Town-wide shutdowns of facilities, eliminating public use in 2020-2021; and
2. Implementation of the 2019 Energy Conservation and Demand Management Plan (ECDMP) and Green Fleet Action Plan (GFAP)

COVID-19 was responsible for the shutdown of facilities, limiting energy use. However, in 2019 the Town adopted the ECDMP and GFAP. Both plans serve to guide the Town to reduce energy consumption through the implementation of energy conservation measures.

It is important to note that the targets listed in Table 2 are in alignment to the Town's 2019 ECDMP. As of 2022, the Town has doubled, and in some cases tripled, the ECDMP's 2024 targets. The Town is in the process of updating its 2019 ECDMP which will introduce new goals.

Advisory Committee Review

The Environmental Advisory Committee (EAC) received a presentation on the draft CEAP 2022 Progress Report on September 18, 2023. This presentation included the CEAP purposes and themes, reporting process, objectives, and energy performance at Town-owned facilities. The Committee members inquired about the targets outlined in the CEAP and whether the Town was on track on meeting those targets.

Legal Considerations

None.

Financial Implications

There are not any direct financial implications as a result of this report. All noted completed actions for 2022 were funded from previous Council approved operating and capital budgets.

Communications Considerations

The Town will inform both the public and internal stakeholders on the actions that the Town has taken in support of the CEAP by posting the Progress Report online and through social media posts.

Climate Change Considerations

The purpose of the CEAP is to protect and enhance the natural environment, promote environmental sustainability, integrity, and conservation of resources, and create a practice of environmental stewardship within the community. It's intended to provide corporate direction on key strategic environmental initiatives and assist Council to plan for and implement specific actions to improve the Town's environmental performance and sustainability for future generations.

The development of the CEAP involved the interconnection of many of the Town's environmental plans and policies that, in collaboration, helped structure the environmental goals and objectives set out in the plan.

Link to Strategic Plan

The CEAP 2022 Progress Report is aligned with Aurora's Strategic Plan, which is based on the three pillars of sustainability – environment, community, economy – and establishes a vision for Aurora as “an innovative and sustainable community where neighbours care and businesses thrive”.

Alternative(s) to the Recommendation

None.

Conclusions

The CEAP Progress Report celebrates the Town's environmental initiatives and helps track action plan items. The tracking sheet pilot is considered a success and will continue for future progress reports.

Attachments

Attachment 1 – Corporate Environmental Action Plan 2022 Progress Report DRAFT
(PDF Version)

Previous Reports

PDS22-127 Corporate Environmental Action Plan 2021 Progress Report, September 13, 2022.

Pre-submission Review

Agenda Management Team review on September 28, 2023

Approvals

Approved by Marco Ramunno, Director, Planning and Development Services

Approved by Doug Nadorozny, Chief Administrative Officer

Attachment 1
Corporate Environmental Action Plan 2022 Progress Report DRAFT

WATER CONSERVATION

Objective W1: Reduce Town owned facility water consumption

Objective W2: Reduce the uncontrolled and inadequately controlled storm water areas with respect to both quality and quantity by following recommendations of the Town's Comprehensive Storm water Management Master Plan

- Town Square Greywater system will be operational next year (2024) (W1)
- Number of water meter installations: (W1)
 - 2021: 315
 - 2022: 1000 (104.2% increase compared to 2021)
- Stormwater ponds inspections conducted by the LSRCA on an annual basis and reports are generated and provided to the Town with identified deficiencies. (W2)
- Design for the installation of a new OGS unit along the Murray Drive culvert was completed in 2022. Installation of OGS unit is anticipated to commence in 2023. (W2)
- Engineering and Operations Divisions completed a retrofit of a stormwater management pond facility (WC3 – near Deerhorn Crecent and Kennedy St W). Retrofit consisted of an enlargement permanent pool and a pond cleanout. (W2)
- Operations Division cleans out OGS units on an annual basis (W2)
 - Total number of OGS cleanouts in 2021: 10 units
 - Total number of OGS cleanouts in 2022: 7 units (35.3% decrease compared to 2021)
 - Total number of catch basin cleanouts in 2021: 1,499 units
 - Total number of catch basin cleanouts in 2022: 1,682 units (11.5% increase compared to 2021)
- Total disposal of waste gathered from cleanout activities in 2022: 105 tons (2.5% increase compared to 2021). (W2)
- Operations Division provided maintenance to the LID located at the Aurora

Cultural Centre parking lot. (W2).

- Engineering Division adopting soil regulations (O.Reg 406/19) into design and construction tenders to improve the reuse of soils during construction projects. (W2).
- Engineering Divisions adopting York Region's Infiltration and Inflow Standard for future projects to reduce I&I development on new sanitary sewers. (W2)

SUSTAINABLE URBAN DEVELOPMENT

Objective S1: Foster a sustainable green development and alternate methods of transportation to improve the quality of life of Aurora's residents and Town staff.

- The establishment of the formal policy on Alternative Work Arrangements was developed in 2022 and approved in 2023. Approximately 65% of Town employees are participating in hybrid which reduces the amount of commuting. (S1 and C3)
- Engineering Division introduced a project on the development of a turtle crossing project on Henderson Drive to address wildlife conservation. The project was in its design phase in 2022 with construction anticipated to commence in 2024. (S1)
- Design of new sidewalk projects, located along Edward Street and Industrial Parkway North, to promote active transportation for residents (S1)
- Community garden was planned for a new park construction in the 2C lands. Construction anticipated to commence in 2023, provided available funding. (S1)
- The Town applied for a grant offered through the Green Municipal Fund involving the development of a Feasibility Study for a Community Efficiency Financing Program within the Town. (S1)

WASTE REDUCTION and DIVERSION

Objective D1: Implement sustainable construction practices to reduce waste, incorporate sustainable design and reclaim or recycle materials.

Objective D2: Reduce waste going to landfill disposal.

- Engineering Division incorporated sustainable construction practices for 2022 road reconstruction projects: (D1 and D2)
 - Recycled concrete for granular use for right-turn construction (road widening) project at Yonge and Wellington.
 - Asphalt grindings were used to improve deteriorated pavement at the end of Dunning
- Reuse of existing frames and lids incorporated for catch basin or manhole repairs. (D1 and D2)
- Community waste diversion tracking: (D2)
 - 2018: Aurora's diversion rate: 65% (Baseline)
 - 2019: Aurora's diversion rate: 65%
 - 2020: Aurora's diversion rate: 64%
 - 2021: Aurora's diversion rate: 66%
 - 2022: Aurora's diversion rate: 70% (Increase of 5% compared to 2018)
- Front-end multi-residential recycling program tracking: (D2)
 - 2019: Multi-res participation: 28 buildings
 - 2020: Multi-res participation: 29 buildings
 - 2021: Multi-res participation: 30 buildings
 - 2022: Multi-res participation: 30 buildings (Increase participation rate by 6.9% compared to 2019)
- Bag Tag Program was implemented in January 2022. (D2)
 - The total number of bag tags purchased in 2022: 3,560.
 - The total revenue generated from the bag tag program in 2022: \$17,800.00
- Annual Stewardship Programs (D2 and A1)
 - Event 1: eWaste – January, May, and October
 - Event 2: Cleanup – April and September/October – to be implemented in 2023
 - Event 3: Compost giveaway program – held once a year
 - Event 4: Community garage sale – normally held in summer
 - Event 5: Blue Box Collection Program – continues annually up to 2026

BIODIVERSITY and NATURAL HERITAGE

Objective B1: Enrich Aurora's ecology by protecting and preserving biodiversity.

- Expansion of the David Tomlinson Nature Reserve, located in the 2C lands, into the second phase. Second phase includes trails, boardwalks, native plantings, and ecological features. (S1 and B1)
- Parks Division planted 1,933 trees in 2022. This exceeded tree planting in 2021 by 1.72%. Tree plantings are not part of the tree compensation program. (S1 and B1)
- Online promotions were administered to the public to promote against feeding wildlife on Town-owned property. (B1 and A1)
- The Phragmites strategy was approved by Council in 2022, including operational funding for the next four (4) years. (B1)
- The Town is involved with ongoing partnerships with residents/community groups to remove invasive species including Garlic Mustard and Buckthorn; outreach programs also implemented on this effort. (B1)

CLIMATE CHANGE and ENERGY

Objective C1: Prepare a Climate Change Adaptation Plan

Objective C2: Implement the Provincial Climate Change Plan Actions

Objective C3: Reduce the town's greenhouse gas emissions by town staff and at town facilities. * Actions pulled from the Provincial Climate Change Plan

- The Climate Change Adaptation Plan was completed and endorsed by Council in 2022. (C1)
- The Green Development Standards Phase I was completed and endorsed by Council in 2022. (C1)
- Climate change lens included in the Town's updated Official Plan. (C2)
- Fleet Division continued to upgrade their vehicle fleet with the purchase of more fuel and technologically efficient vehicles. Also in the process of the procurement of an EV Ice Re-surfacer and Ice Edger. (C3)
- Facility Annual Energy Consumption (Natural Gas/Electricity) (C3)
 - Base year: 2018
 - 2018: 23,180,806 equivalent kilowatt-hours
 - 2019: 24,641,678 equivalent kilowatt-hours
 - 2020: 19,860,541 equivalent kilowatt-hours
 - 2021: 19,828,350 equivalent kilowatt-hours
 - 2022: 19,386,242 equivalent kilowatt-hours (2.3% decrease compared to 2021)
- Monthly Building Performance meeting setup with Facility staff and Energy and Climate Change Analyst, to discuss ongoing energy projects, operational changes, energy consumption, trends, best practices for energy conservation, new technologies, utility incentives etc. (ongoing since 2020) (C3)
- EV Charging Station Data (C3)
 - Total charging sessions in 2022: 1,300 sessions
 - Total electricity consumption used in 2022: 12,244 kWh
- The Town generated 649,131 kWh of electricity through its solar PV systems across four (4) Town-owned facilities. (C3)
- Facilities Division hired a consultant to conduct a Building Condition Assessment study across all Town-owned buildings which included energy conservation measures. (C3)

- Council approved \$50,000 in 2022 budget for capital projects involving energy conservation measures at Town-owned facilities. (C3)

ENVIRONMENTAL AWARENESS

Objective A1: Encourage the stewardship of Aurora's natural resources and advance green initiatives by promoting community involvement.

- Shared York region social media messaging related to water quality. Partnered with the region to access Water related print materials that are given out at Access Aurora. (A1)

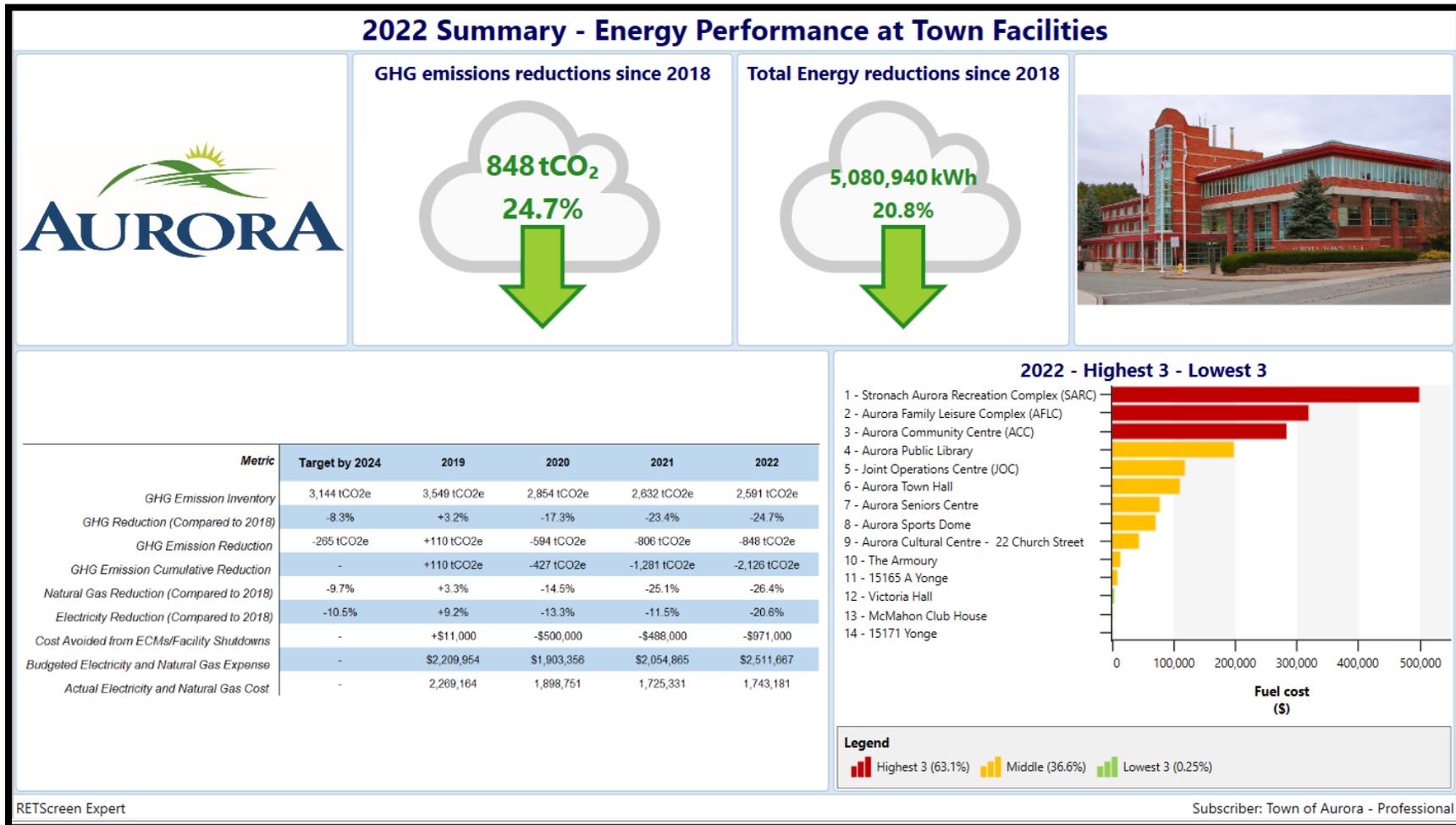
- Aurora Chamber Street Festival - Presence of Enbridge Gas, as a Presenting Sponsor, providing information on Home Energy Rebate Plus (HER+) and Home Winterproofing Program (HWP). KPIs from event: (A1 and C3)
 - # of interactions: 210
 - # of sign-ups for HER+: 45

- Shared LEAF social media messaging regarding Backyard planting program, as well as Arboretum and LSRCA efforts. (A1)

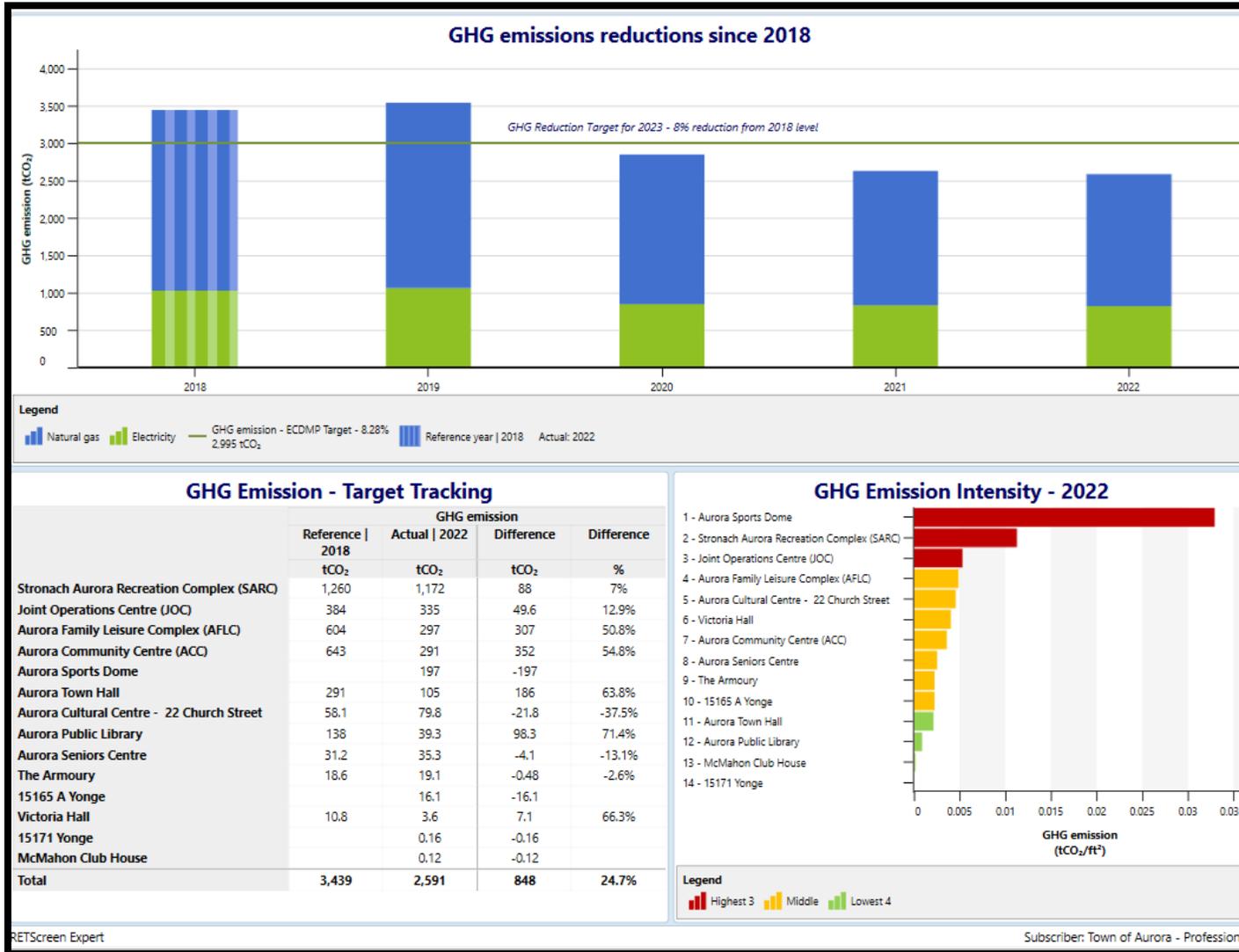
- Parks promoted the adopt-a-park program to Town residents (Ongoing initiative), as well as supported the Arboretum planting, Neighborhood work, and the planting of trees and shrubs. (A1)

ANNEX 1

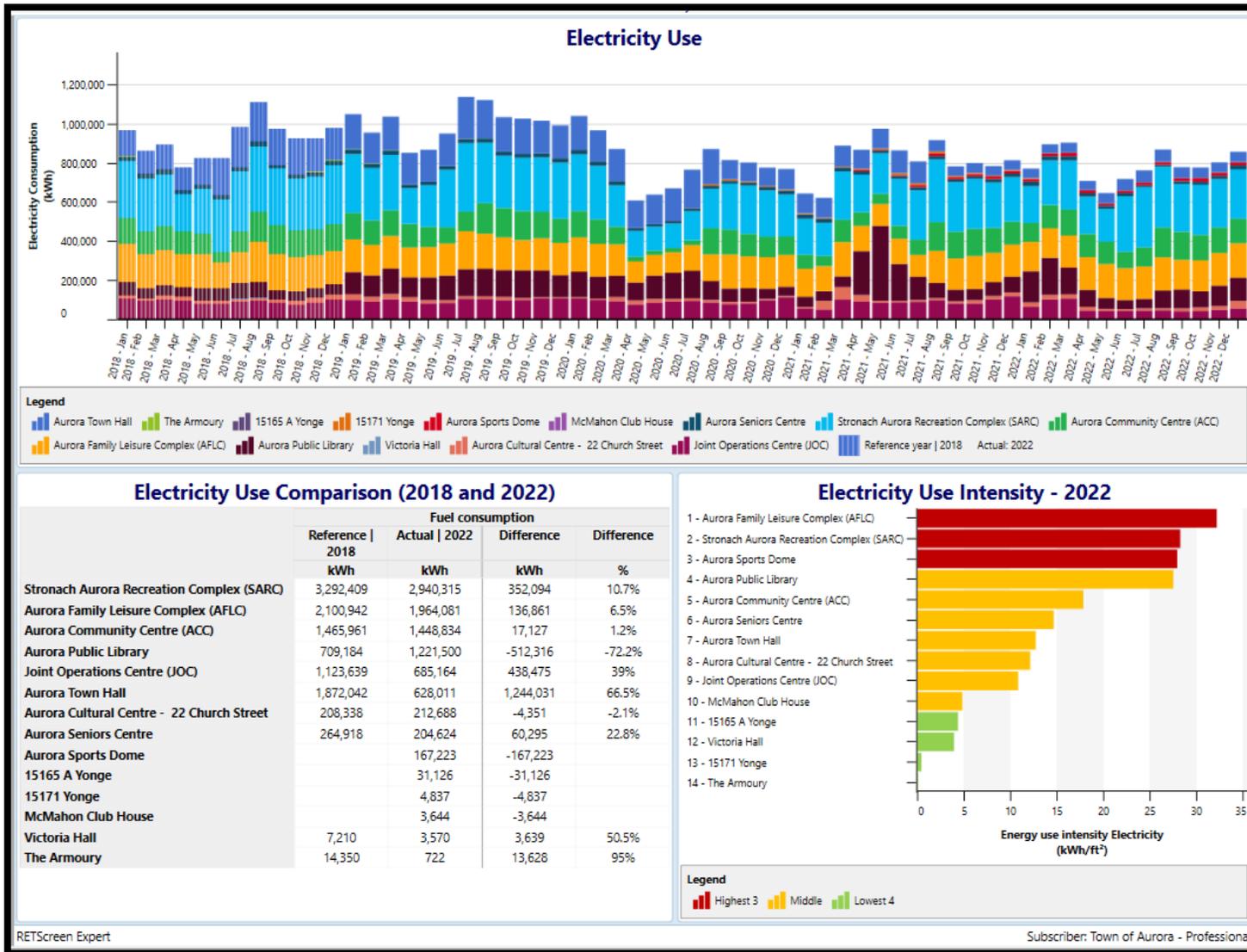
2022 Building Energy Performance at Town Facilities



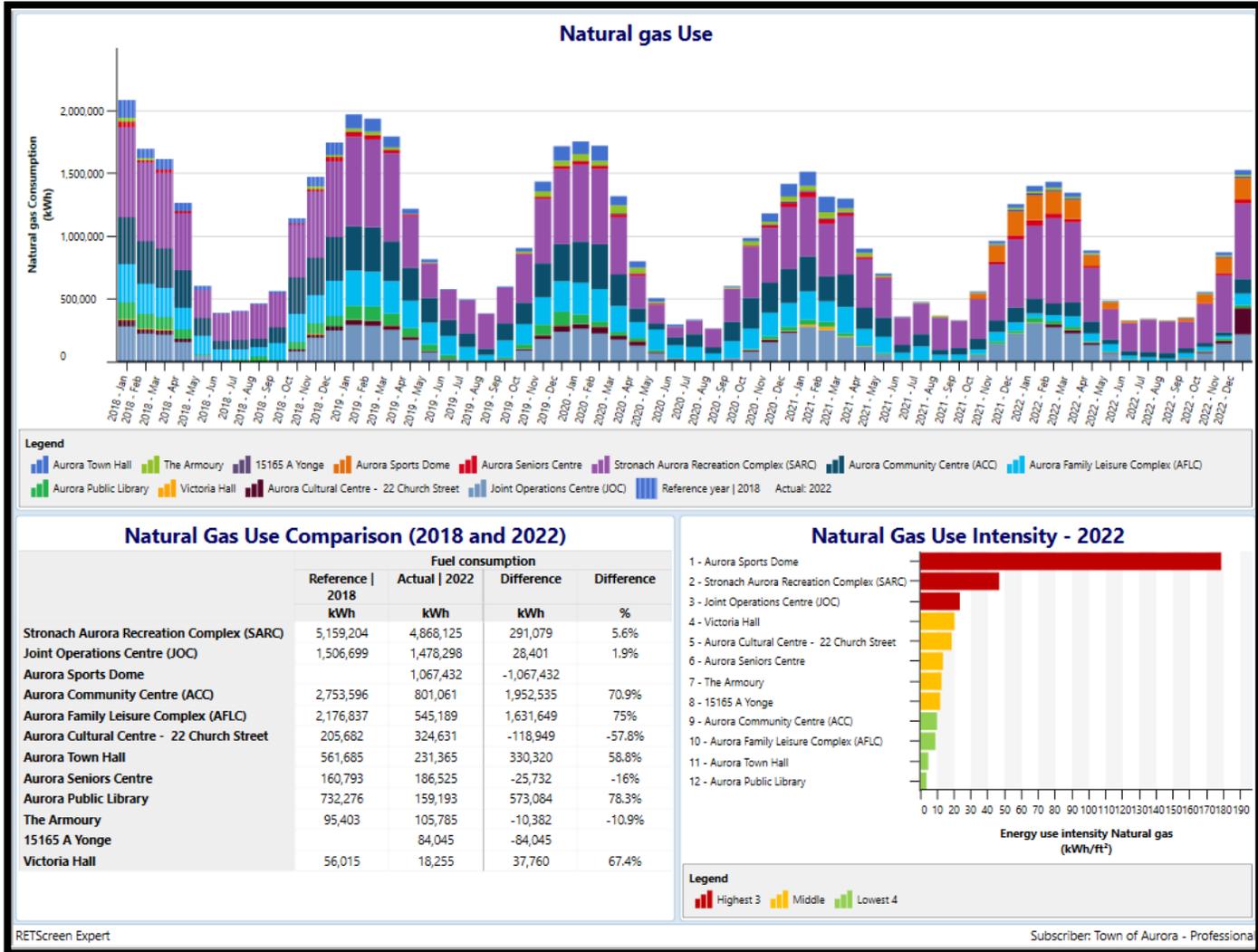
GHG Emissions from Town Facilities



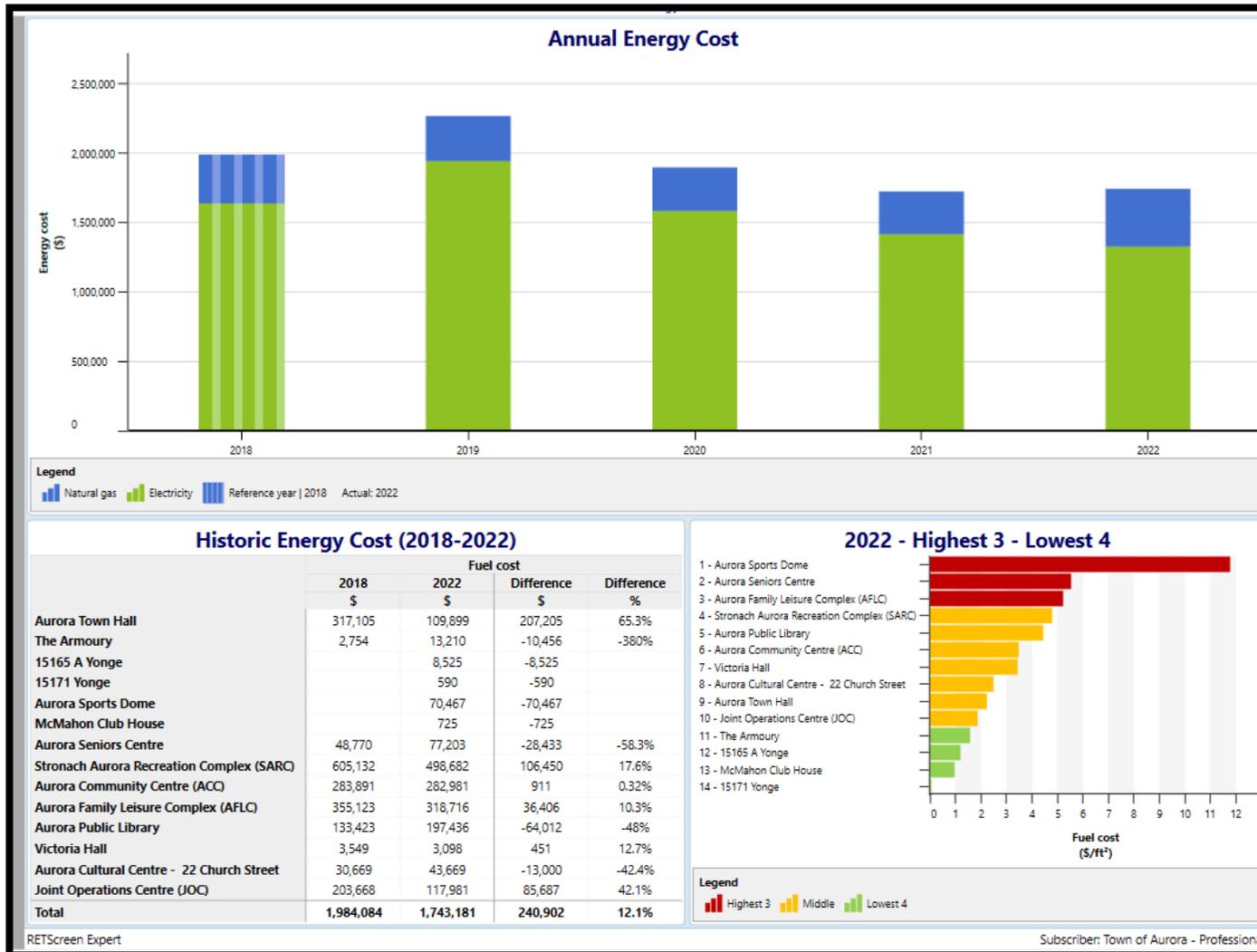
Electricity Use Portfolio



Natural Gas Use Portfolio



Annual 2022 Energy Cost at Town Facilities



Energy Costs Avoided Due to ECMs

