



Corporate Environmental
ACTION PLAN (CEAP)

CORPORATE ENVIRONMENTAL ACTION PLAN (CEAP)

2021 PROGRESS REPORT



■ 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 Stormwater Management Master Plan



- Town Operations installed an in-ground holding tank at library square to harvest and repurpose greywater, generated from splashpad usage, as a resource for irrigation for landscape and vegetation (W1);
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- Town Operations changed 315 water meters in 2021 as part of its water loss reduction strategy (W1);
- Replaced sanitary laterals as part of its water loss reduction strategy (W1).



■ SUSTAINABLE URBAN DEVELOPMENT

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

- Applied low impact development techniques during construction of the 2021 road reconstruction projects (bio-swales and enhanced oil/grit separators) (S1 and W2);
- The Town participated and maintained the Annual Smart Commute Designation Award, maintaining the Gold Standard every year since 2012 (S1);
- Implementation of LEED GOLD certified design features on Town-owned facilities during construction of the 2021 construction projects (water conservation low-flow hands-free plumbing fixtures; daylighting; high efficiency water fixtures and HVAC units; thermal comfort and control systems LIDs; drought resistant plantings; and rainwater harvest designs) (W1, S1, and C3).



■ WASTE REDUCTION & 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

- Included recycled concrete material as a provisional item as part of the 2021 road reconstruction project procurement to encourage sustainable construction and building practices for Town-owned infrastructure (D1);
- Integrated energy and waste reducing methodological practices as part of the 2021 infrastructure maintenance and monitoring projects (on-site helical piles, repurposing of topsoil stockpiles, and web-based infrastructure maintenance and monitoring applications) (D1, D2, and C3);
- Integrated CB Shields as part of the 2021 storm pond reconstruction project (W2 and D1);
- As part of the Town's Waste Reduction Strategies, the Town set 2018 as a base year for tracking community-level waste diversion rates (D2):
 - 2018: 65%
 - 2019: 65%
 - 2020: 64%
 - 2021: 66%
- Council approved the Bag Tag Program, which aims to educate residents on proper waste disposal practices and increase Town-wide waste diversion rates (D2);
- Increased the number of multi-residential buildings within the Town's recycling program (D2);



■ BIODIVERSITY & NATURAL HERITAGE

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



- Planted 1,900 trees and shrubs on Aurora lands (B1);
- A thirteenth partnership was established in 2021 with the Adopt-a-Park Program and Partnership development (Herb McKenzie Park) (B1);
- Maintained the partnership with York Region for invasive species control where Phragmites, Garlic Mustard, Giant Hog Weed, and European Buckthorn were targeted on regional frontage adjacent to Aurora parkland. Arboretum continued work on Phragmites control (B1).



■ CLIMATE CHANGE & ENERGY

Objective C1: Prepare a Climate Change Adaptation Plan

Objective C2: Implement the Provincial Climate Change Plan Actions

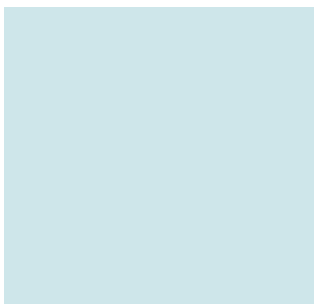
Objective C3: Reduce the town's greenhouse gas emissions by town staff and at town facilities. * Actions pulled from the Provincial Climate Change Plan

- The Town had the kick-off to their Climate Change Adaptation Plan (CCAP) and Green Development Standard (GDS) in 2021 (C1);
- Integrated Aurora's *Every Second Counts* public education campaign in 2021, as part of the Council-approved Anti-Idling policy (C3);
- Council approved the Town's first Green Fleet Action Plan (GFAP) and Electric Vehicle Charging Station Policy, which aims to electrify the Town's corporate fleet to produce zero emissions by 2051 (C3);



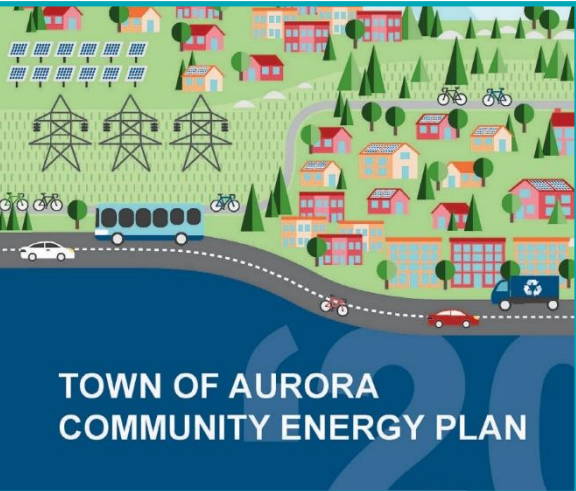
■ CLIMATE CHANGE & ENERGY

- The Town had partnered with IVY Charge and installed eight (8) dual head level 2 chargers at Town-owned facilities; with proposed actions on installing two (2) additional dual head chargers as part of the Library Square Project (C3);
- Continued energy use tracking at Town Facilities (C3):
 - 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
- Council approved \$50,000 for the implementation of energy efficient measures within Town-owned facilities, as part of effort to reduce corporate emissions (C3);
- Acquisition and implementation of energy efficient infrastructure within Town-owned facilities (C3);
- Generated 613,727 kilowatt-hours of electricity from Town solar rooftop systems (C3);
- Continued adoption of monthly Building Performance meetings 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. (C3);
- Continued investigation of new technology to improve energy efficiency at SARC using the Building Automation System innovation (C3);
- Performed a building audit, for natural gas consumption, under Enbridge's *Run It Right* program, resulting to reductions to annual GHG emissions and operational costs across Town-owned facilities (C3);
- Integration of operational changes at town-owned facilities, in effort to reduce energy consumption during COVID-19 shutdown, resulted to an estimated energy cost avoidance of \$488,000 (~23% energy avoidance) in 2021 (C3).



ENVIRONMENTAL AWARENESS

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



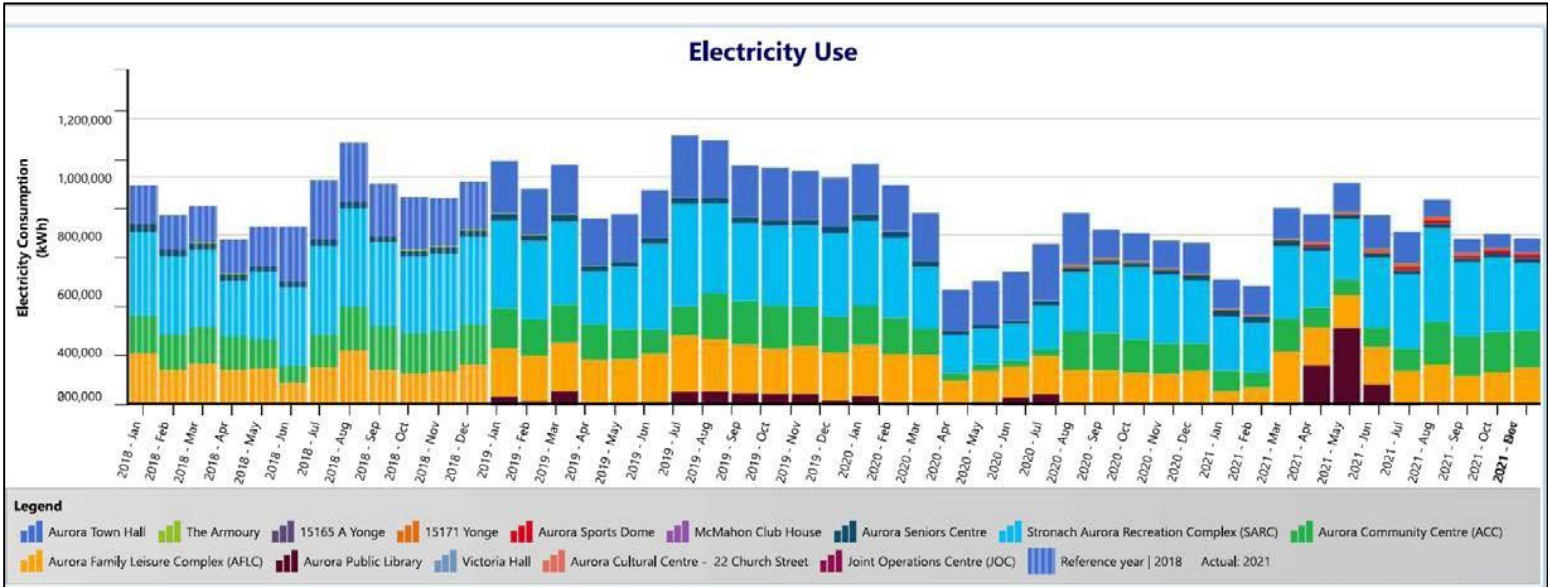
- Continued efforts on updating the Town of Aurora website, providing the community up-to-date information on the Town's climate change initiatives and plans (A1);
- Integration of Every Second Counts Anti-Idling education campaign (A1);
- Integration of two (2) Community Environmental awareness GO Green Challenges (A1);
- Developed an enhanced Lymantria Dispar Dispar (LDD) strategy that includes monitoring, robust communication plan, burlap kits, and watering and injection treatments of select prominent trees (A1).

- Participated in the Climatewise Business Network's Mayor's Energy Challenge, where Mayor Mrakas challenged local businesses to report energy and water consumption under Ontario's Energy and Water Reporting and Benchmarking (EWRB) program to support building owners and managers in making decisions on how to improve their building's efficiency. The education campaign consisted of a video by the Mayor, news conference with local municipalities, social media promotion and the creation of a Town Website to support busine



2021 BUILDING ENERGY PERFORMANCE AT TOWN FACILITIES

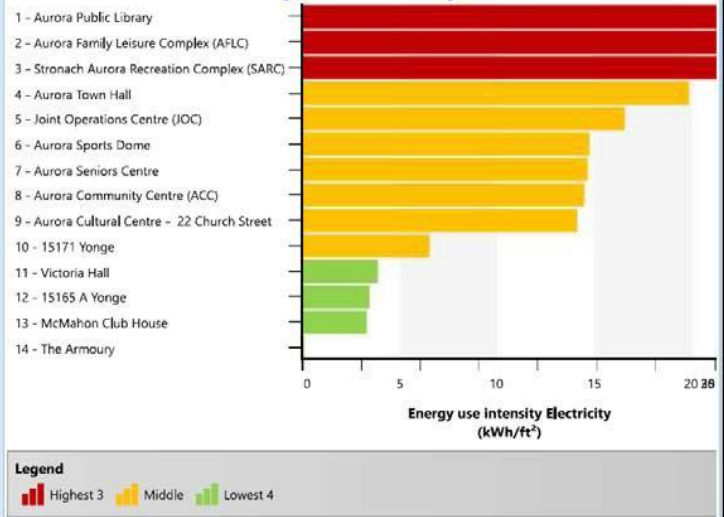
Annex 1 - 2021 Energy Performance from Town Facilities



Electricity Use Comparison (2018 and 2021)

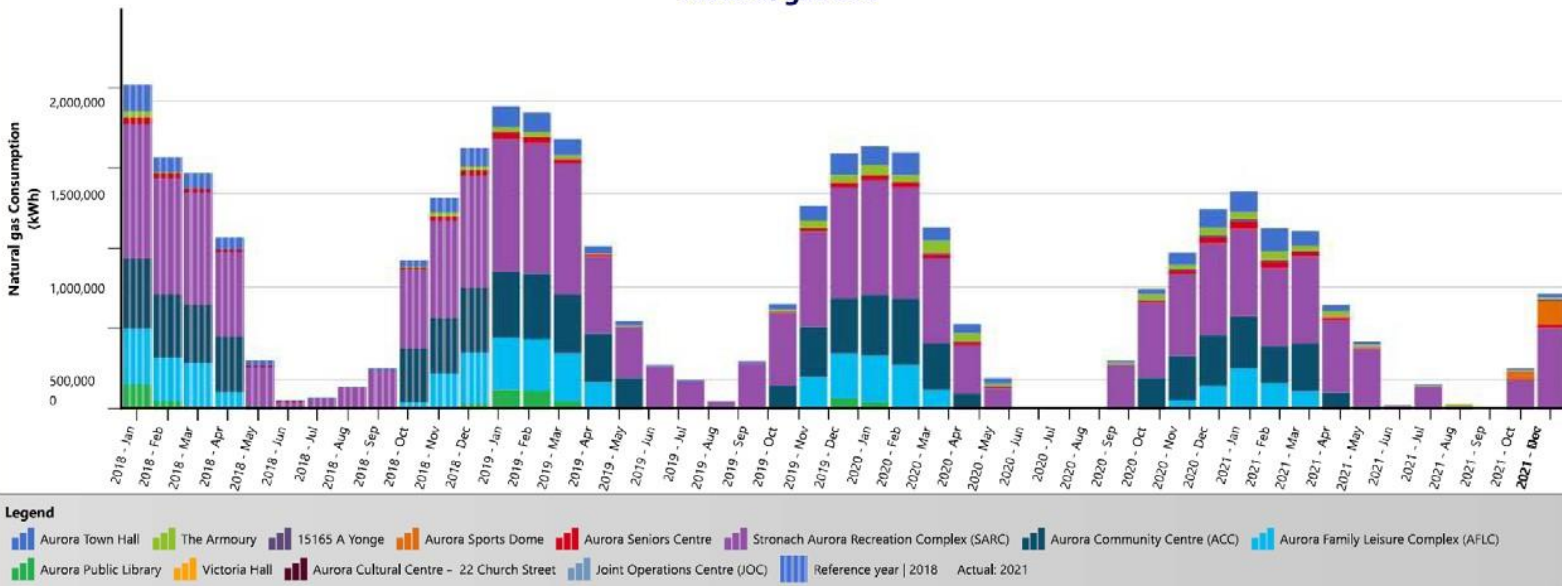
	Fuel consumption			
	Reference 2018	Actual 2021	Difference	Difference %
	kWh	kWh	kWh	%
Stonach Aurora Recreation Complex (SARC)	3,292,409	2,794,396	498,013	15.1%
Aurora Family Leisure Complex (AFLC)	2,100,942	1,743,762	357,180	17%
Aurora Public Library	709,184	1,416,072	-706,888	-99.7%
Aurora Community Centre (ACC)	1,465,961	1,174,228	291,733	19.9%
Joint Operations Centre (JOC)	1,123,639	1,045,926	77,713	6.9%
Aurora Town Hall	1,872,042	978,611	893,431	47.7%
Aurora Cultural Centre - 22 Church Street	208,338	247,019	-38,681	-18.6%
Aurora Seniors Centre	264,918	204,138	60,781	22.9%
Aurora Sports Dome		88,208	-88,208	
15171 Yonge		68,677	-68,677	
15165 A Yonge		24,440	-24,440	
Victoria Hall	7,210	3,488	3,722	51.6%
McMahon Club House		2,476	-2,476	
The Armoury		630	13,719	95.6%
Total	11,058,994	9,792,072	1,266,922	11.5%

Electricity Use Intensity - 2021



Annex 1 - 2021 Energy Performance from Town Facilities

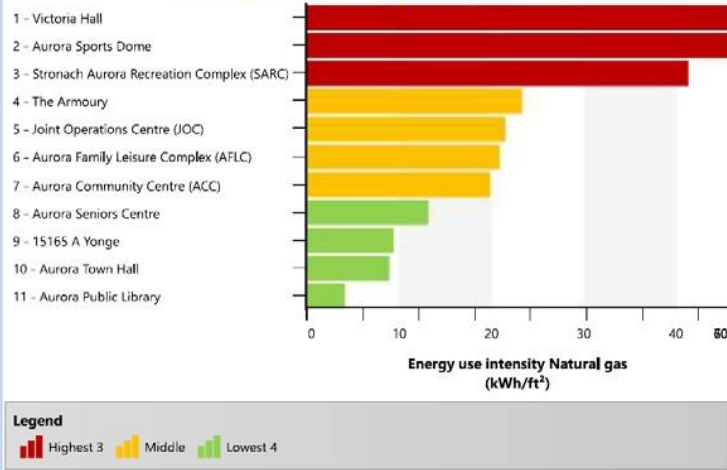
Natural gas Use



Natural Gas Use Comparison (2018 and 2021)

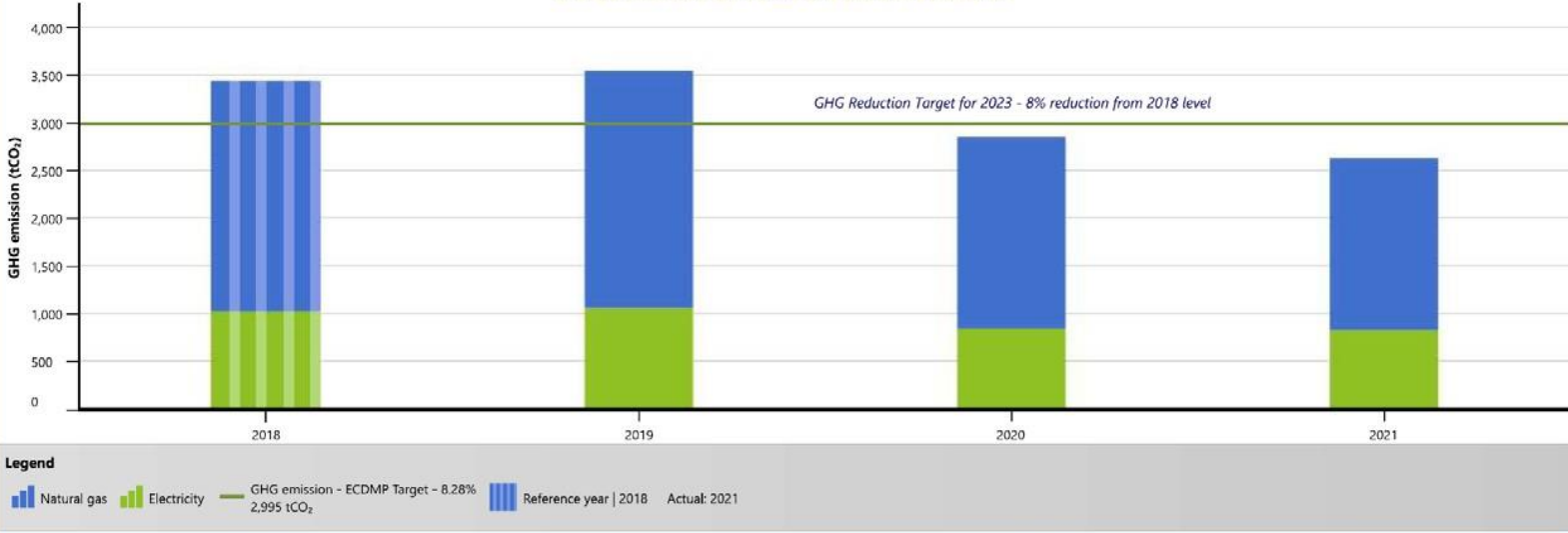
	Fuel consumption			
	Reference 2018	Actual 2021	Difference	Difference %
	kWh	kWh	kWh	%
Stronach Aurora Recreation Complex (SARC)	5,159,204	4,292,750	866,454	16.8%
Aurora Community Centre (ACC)	2,753,596	1,610,660	1,142,936	41.5%
Joint Operations Centre (JOC)	1,506,699	1,356,879	149,820	9.9%
Aurora Family Leisure Complex (AFLC)	2,176,837	1,274,816	902,022	41.4%
Aurora Town Hall	561,685	440,854	120,831	21.5%
Aurora Sports Dome		367,224	-367,224	
The Armoury	95,403	195,783	-100,381	-105%
Aurora Public Library	732,276	184,835	547,442	74.8%
Aurora Seniors Centre	160,793	183,665	-22,873	-14.2%
15165 A Yonge		67,055	-67,055	
Victoria Hall	56,015	61,757	-5,743	-10.3%
Aurora Cultural Centre - 22 Church Street	205,682		205,682	100%
Total	13,408,188	10,036,278	3,371,910	25.1%

Natural Gas Use Intensity - 2021



Annex 1 - 2021 Energy Performance from Town Facilities

GHG emissions reductions since 2018



GHG Emission - Target Tracking

	GHG emission			
	Reference 2018	Actual 2021	Difference	Difference %
	tCO ₂	tCO ₂	tCO ₂	%
Stronach Aurora Recreation Complex (SARC)	1,260	1,054	206	16.4%
Aurora Community Centre (ACC)	643	408	235	36.5%
Aurora Family Leisure Complex (AFLC)	604	406	198	32.8%
Joint Operations Centre (JOC)	384	350	34.8	9%
Aurora Town Hall	291	179	112	38.6%
Aurora Sports Dome		68.7	-68.7	
Aurora Public Library	138	45.6	92	66.8%
The Armoury	18.6	35.2	-16.6	-89.5%
Aurora Seniors Centre	31.2	34.7	-3.6	-11.4%
Aurora Cultural Centre - 22 Church Street	58.1	25.1	33	56.8%
15165 A Yonge		12.8	-12.8	
Victoria Hall	10.8	11.4	-0.65	-6%
15171 Yonge		2.2	-2.2	
McMahon Club House		0.08	-0.08	
Total	3,439	2,632	806	23.4%

GHG Emission Intensity - 2021

