



## Partners in Project Green

A Program of Toronto and Region Conservation Authority

# Energy Leaders Consortium

## Site Visit at Molson-Coors

Sept 14, 2023

We respectfully acknowledge that we are situated on the Traditional Territories and Treaty Lands, in particular those of the Mississaugas of the Credit First Nation, as well as the Anishinaabe of the Williams Treaty First Nations, the Huron Wendat, the Haudenosaunee, and the Metis Nation.

As stewards of land and water resources within the Greater Toronto Region, Toronto and Region Conservation Authority appreciates and respects the history and diversity of the land and is grateful to have the opportunity to work and meet on this territory.



# Additional Resources

- [yrnature.ca/acknowledging\\_land](http://yrnature.ca/acknowledging_land)
- [edgeofthebush.ca](http://edgeofthebush.ca)
- [native-land.ca](http://native-land.ca)
- Text 1-855-917-5263 with your City and Province to learn whose traditional territory you're on  
(standard text messaging rates may apply)



# A Collaborative Space for All

Proposed Operative Values for ELC meetings:

1. Balance airtime to hear from as many voices as possible
2. Be curious and challenge our own assumptions and biases
3. Be open to building on each other's suggestions or taking the conversation in another direction
4. We are here to tackle climate action as a community



# Agenda

Time	Activity
8:30am – 9:00am	Arrival and Networking
9:00am – 9:30am	Welcoming Remarks, Introduction, & Updates from PPG
9:30am – 10:20am	Molson-Coors Presentation
10:30am – 11:10am	Quantify Environmental Ltd Presentation
11:10am – 12:00pm	Molson-Coors Tour
12:00pm – 12:05pm	Closing Remarks
12:05pm - 12:30pm	Networking and Session End



# Introduction



# Upcoming ELC Sessions & PPG Events

Date	Topic
<b>Thurs, Oct 26th</b> 1:00pm-2:00pm	<b>Online Presentation with Rondo Energy:</b> Learn about their technology that connects renewable energy with heat batteries to deliver low-carbon heat and steam to end users.
<b>Tuesday, Nov 7th</b> 8:30am-12:30pm	<b>Site Visit to TRCA's new Headquarters:</b> Take a guided tour of our new Head Office (nearing completion) and learn more about the low-carbon, energy-saving, and efficiencies implemented throughout this new building.

Please contact Julia Kole if you are interested in hosting an ELC Site Visits, have a presentation topic suggestion or would like to present at a Member Roundtable this year



# ELC Member Updates

PPG would like to welcome Centennial College and Seneca College as our newest members to the ELC!







# Fall Tree Planting

Date: September 23, 2023

Time: 9:00 am – 1:00 pm

Location: Claireville Conservation Area, Brampton

Cost: Free for Members

*Feel free to bring your family & friends!*

[Register here!](#)







# Sustainability Leaders Social

Join us on Thursday September 21 in Downtown Toronto for an afternoon of networking and learning from industry peers during PPG's inaugural Fall Sustainability Leaders Social.

Hosted at the TELUS Tower, this exclusive event will bring together PPG members and other industry leaders from across the GTA.

## Event Details

**Location:** TELUS Tower, 25 York Street, Toronto

**Date:** Thursday, September 21

**Time:** 3PM – 6PM

Hosted by:



[Register Today](#)





# Partners in Project Green Celebrates 15 Years Meeting People Where They're At: Systemic Change, Partnerships & Moving Forward

**Date:** October 19, 2023

**Time:** 3:00pm-6:00pm

**Location:** C-Banquets, 300 City Centre Drive,  
12th Floor, Mississauga

**Cost:** \$25/ Free for PPG Members + 1 guest/  
Free for past PPG Members

**Event Giveaways:** All attendees will receive a free copy of our keynote speaker, Author Paul Klein's book, *Change for Good* & be entered into a surprise draw!

**Link:** <https://partnersinprojectgreen.com/events/partners-in-project-green-celebrates-15-years/>





# Updates and Reminders

- **Low Carbon Economy Challenge:** Applications will be accepted from October 3 to January 12, 2024.
- **FoodShift Program:** Applications open now until 11:59 EDT Oct 6th 2023.
- IESO plans to introduce new mid-stream lighting incentive program in Q4 2023
- **We are looking to grow the ELC!**
  - Please help us connect with other industry leaders that would be a great fit for the ELC.



# Today's Presenters



**Rajeev Dhiman, Chief Operating Engineer, Molson-Coors**

[rajeev.dhiman@molsoncoors.com](mailto:rajeev.dhiman@molsoncoors.com)

Rajeev brings years of experience managing the power-house in steam and power generation, HVAC building operating systems, supply of chilled and hot water, water treatment, refrigeration and gases. He has proven expertise in forecasting and purchasing utilities, managing equipment changeover projects, vendors, contractors and bids.

Driven to uphold system reliability in compliance with the Safety Authority, Rajeev proactively seeks opportunities to improve system efficiencies.



# Today's Presenters



**Dave Fox, Principal and Founder, Quantify Environmental Ltd.**

[dave@quantifyenv.com](mailto:dave@quantifyenv.com)

In 2022, Dave and Tom Ulanowski, rolled up their sleeves and launched Quantify Environmental Ltd. ([www.quantifyenv.com](http://www.quantifyenv.com)), a consultancy firm unique for its dedication to genuine and practical environmental sustainability within the ICI world.

Quantify is a hub of innovation dedicated to environmental sustainability to design and integrate cutting-edge, IoT-enabled sensors, helping industrial and commercial clients use less and gain more.





# Molson-Coors Presentation





# Toronto Brewery Overview



**MOLSON**  
**COORS** beverage  
company



# Brewery Leadership Team



Tan Le  
Brewery  
General  
Manager



David Wu  
Director  
of  
Brewing

Mike  
White

Director  
of  
Packagi  
ng

Jamie  
Fama

Producti  
on  
Service  
Mgr

Roland Li

Technical  
Services  
Director

Steve  
Morey

WCSC  
Manag  
er

Sejal  
Patel

EHS  
Manag  
er

Marta  
Horotker

QFS  
Manag  
er

Erin  
Jonasso

Manag  
er, HRBP

Madawa  
Madanaya

ke  
Brewery  
Controll  
er

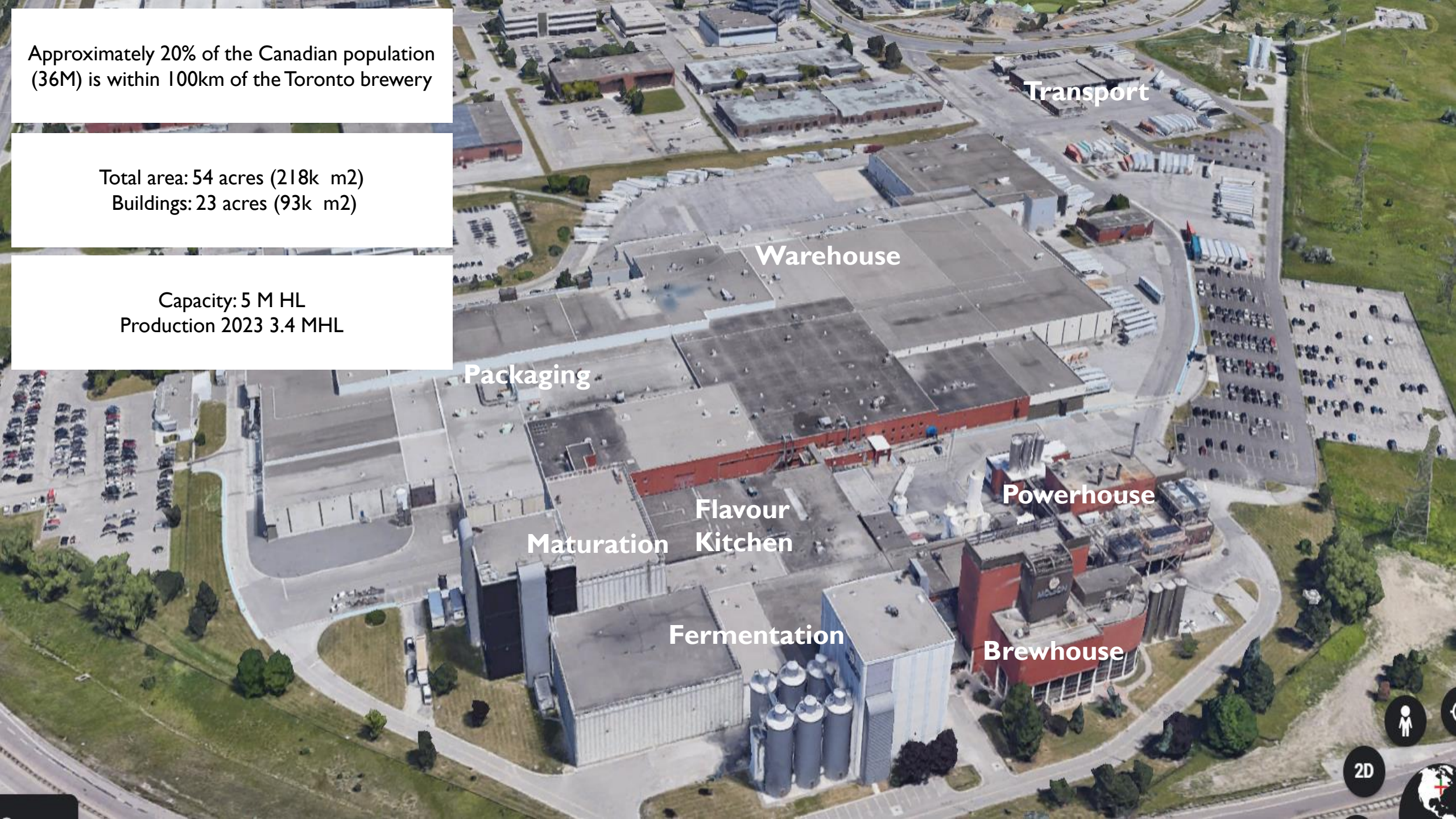




Approximately 20% of the Canadian population (36M) is within 100km of the Toronto brewery

Total area: 54 acres (218k m<sup>2</sup>)  
Buildings: 23 acres (93k m<sup>2</sup>)

Capacity: 5 M HL  
Production 2023 3.4 MHL



Warehouse

Transport

Packaging

Flavour  
Kitchen

Powerhouse

Fermentation

Brewhouse



# Toronto Brewery Highlights

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- 1958 – Construction Began
- 1961 – First Commercial Production
- 1973 – Location was renamed Carling O`Keefe
- 1989 – Merger between Molson and Carling (Closure of the Fleet Street Brewery)
- 2000 – Barrie Brewery is closed
- 2005 – Molson Coors!
- 2011 – Contract Brewing Agreement with FIFCO
- 2014 – Significant investment into C2 can lines and bottle washer
- 2016 – Molson Coors acquires MillerCoors to become the 3<sup>rd</sup> largest global brewer
- 2017 – Investment into B5 bottle line with new packers
- 2019 – Investment into C4 can line with new filler/seamers
- 2020 – Investment into B5 bottle line with a new labeler (additional PSL capability)
- 2021 – Significant investment in brewing and packaging to enable flavor beverage capabilities

# Brewing Highlights

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## Brewhouse

Two Brewhouse (666 - 550 HL)  
18 brews in per day (total)  
Wet Mills operating in Parallel  
Huppmann Lauter Tuns  
2.5 hours center per side

## Fermentation

5 Yeast Strains  
62 Fermenters  
2 Racking Lines/Centrifuges  
Dry Hopping Capability

## Flavor Kitchen

RO & Nano Filtration  
Low Flash Capacity  
Malt and Spirit based  
Capacity of 600khl with option to expand

## Maturation

82 Maturation Tanks  
Capacity of 103,444 HL

## Filtration

CPA1: Primus DE Filter Schenk ZHF (1990)

- No Polishing Centrifuge
- 1000/hl per hour

CPA2: US DE Filter (1975)

- No Polishing Centrifuge
- 600/hl per hour



# Packaging Highlights

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## Two Bottle Lines (2 Fillers) – 20% of Total Volume

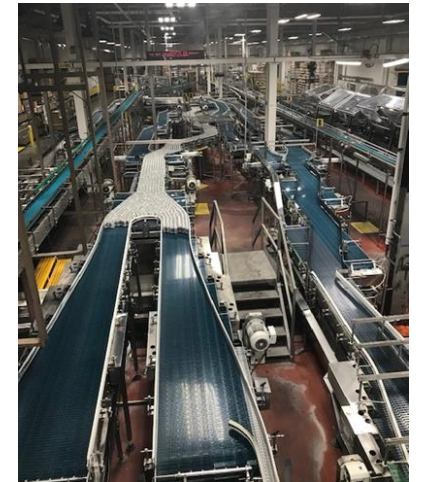
- 5 Bottles (341 ml (AT2), 355 ml (FMRP), 11.5oz (AQNT), 330 ml (SOL), MHL/AMSU)
- Packaging Formats – 6, 12, 15, 18, 20, 24, 28

## Four Can Lines (4 Fillers) – 70% of Total Volume

- 222 ml – 4 & 8 packs
- 355 Sleek – 6, 12, 24 packs
- 355 ml IS – 6, 8, 12, 15, 18, 24, 24 Duo, 30 Duo, and 36 Duo
- 473 ml IS – 6, 12, 24
- 710 ml – 12 packs

## Two Keg Lines – 10% of Total Volume

- K7 – 30, 50, 58.6 liters kegs
- K8 – 20 liters kegs

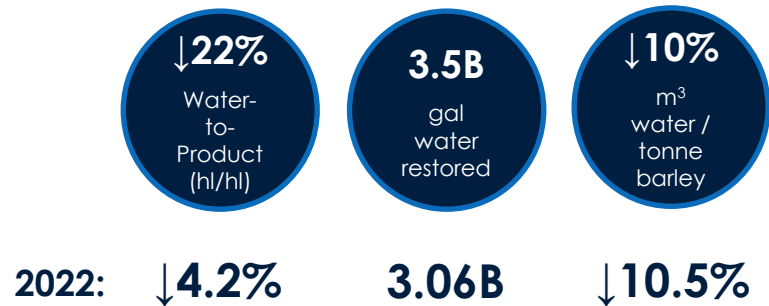


# Sustainability Highlights – Our Imprint Goals

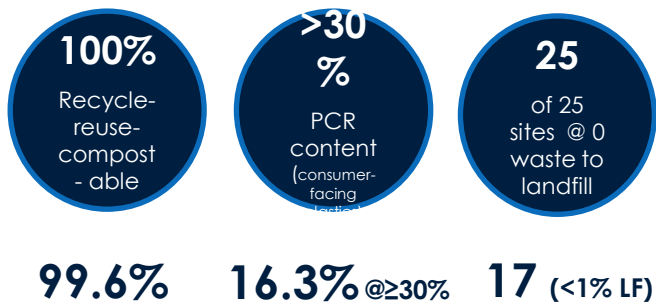
## Climate Action (vs 2016)



## Water Resilience (2025 vs 2016)

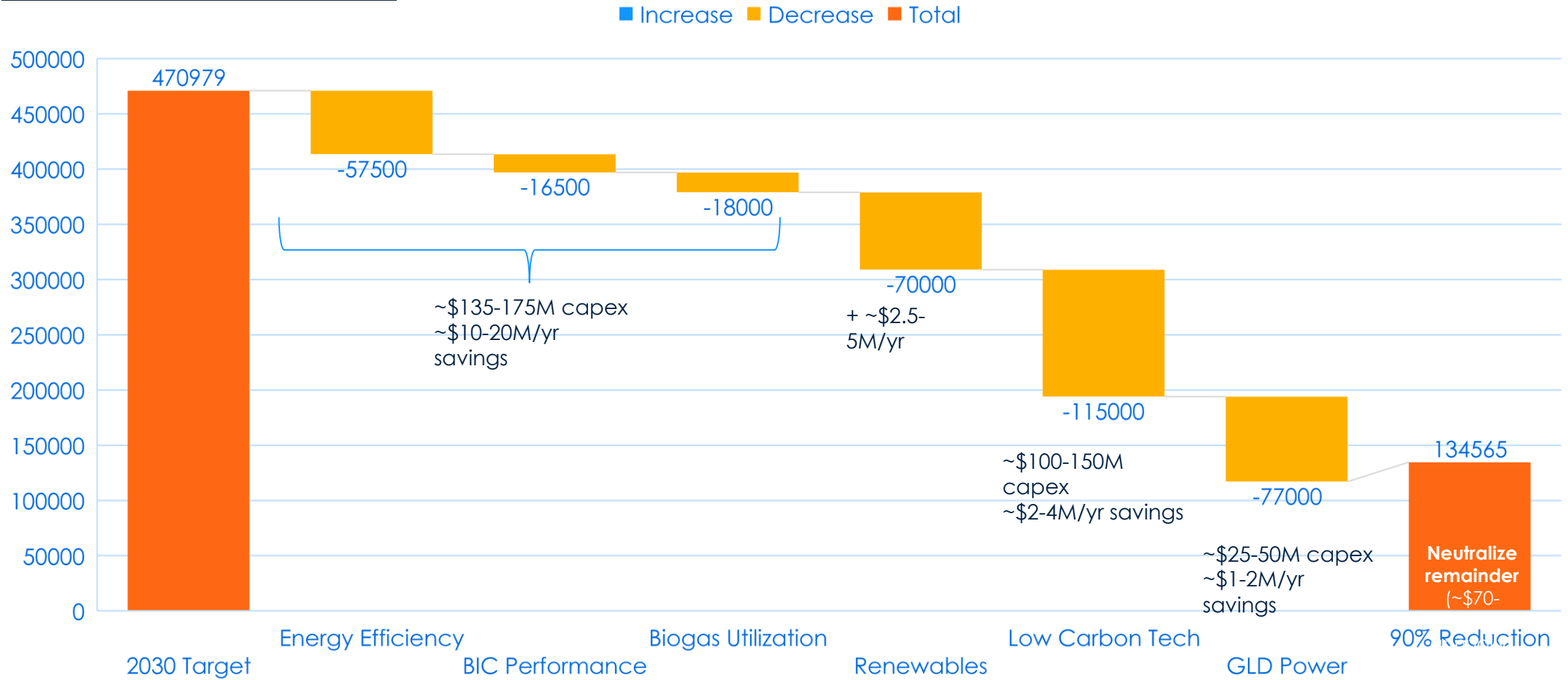


## Packaging & Waste (2025)





# Sustainability Highlights – Scope 1+2 Pathway to Net Zero (90% reduction from 2016 baseline & neutralization)



# Sustainability Highlights – Water Use Efficiency

NA = ~75% Global  
2023 production;  
2023 NA volumes =  
~80% of 2016 NA

(hl/hl)	2016	2021	2022	Q1 2023	2023 Goal	2025 Goal	2023 AOP Prod'n Vol
US	3.16	3.06	3.19	3.30	2.96	2.63	50,812,938
Canada	5.14	3.62	3.62	3.68	3.21	3.09	6,221,375
<b>Americas</b>	<b>3.36</b>	<b>3.12</b>	<b>3.24</b>	<b>3.35</b>	<b>2.99</b>		<b>57,034,313</b>
<b>EMEA &amp; APAC</b>	<b>4.19</b>	<b>4.18</b>	<b>4.00</b>	<b>4.30</b>	<b>3.98</b>	3.22	<b>19,782,332</b>
<b>GLOBAL MCBC</b>	<b>3.54</b>	<b>3.37</b>	<b>3.43</b>	<b>3.55</b>	<b>3.25</b>	<b>2.80</b>	<b>76,816,645</b>

Benchmarking	2017	2018	2019	2020	2021	2022	Target
Molson Coors	3.57	3.52	3.41	3.37	3.38	3.43	2025: <b>2.8</b>
ABInBev	3.09	2.95	2.80	2.70	2.66	2.64	2025: <b>2.5</b>
Heineken			3.4	3.4	3.4 (3.1 in water stressed areas)	3.3 (3.0 in water stressed areas)	2030: <b>2.9</b> (2.6 in water stressed areas)





# **Site Specific Sustainability Highlights – Condensate Management, Boiler Reverse Osmosis Unit and Condensing Economizer & Low-tier Hot Water System**

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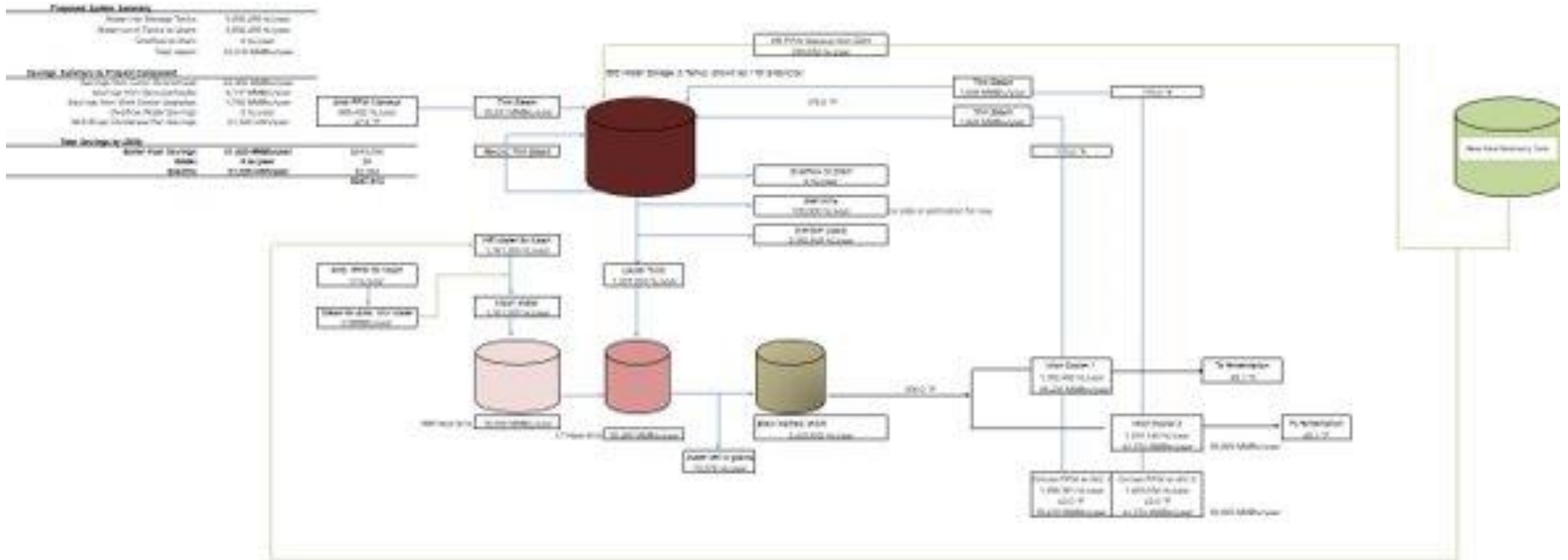
## **Condensate Management & Reverse Osmosis (RO) Unit for Boiler**

- ~80-85% condensate return
  - Pulse Steam Trap Monitoring
- Reverse Osmosis (RO) Unit for Boiler Feed Water
  - Blowdown minimization (>100 cycles), reduce make-up water heating requirements [energy avoidance: 2000 GJ/year]

## **Condensing Economizer and Low Tier Hot Water (Future)**

- Utilize flue gas waste heat to create low-tier hot water system for process use and minimize hot-water system usage

# Site Specific Sustainability Highlights – Condensate Management, Boiler Reverse Osmosis Unit and Condensing Economizer & Low-tier Hot Water System



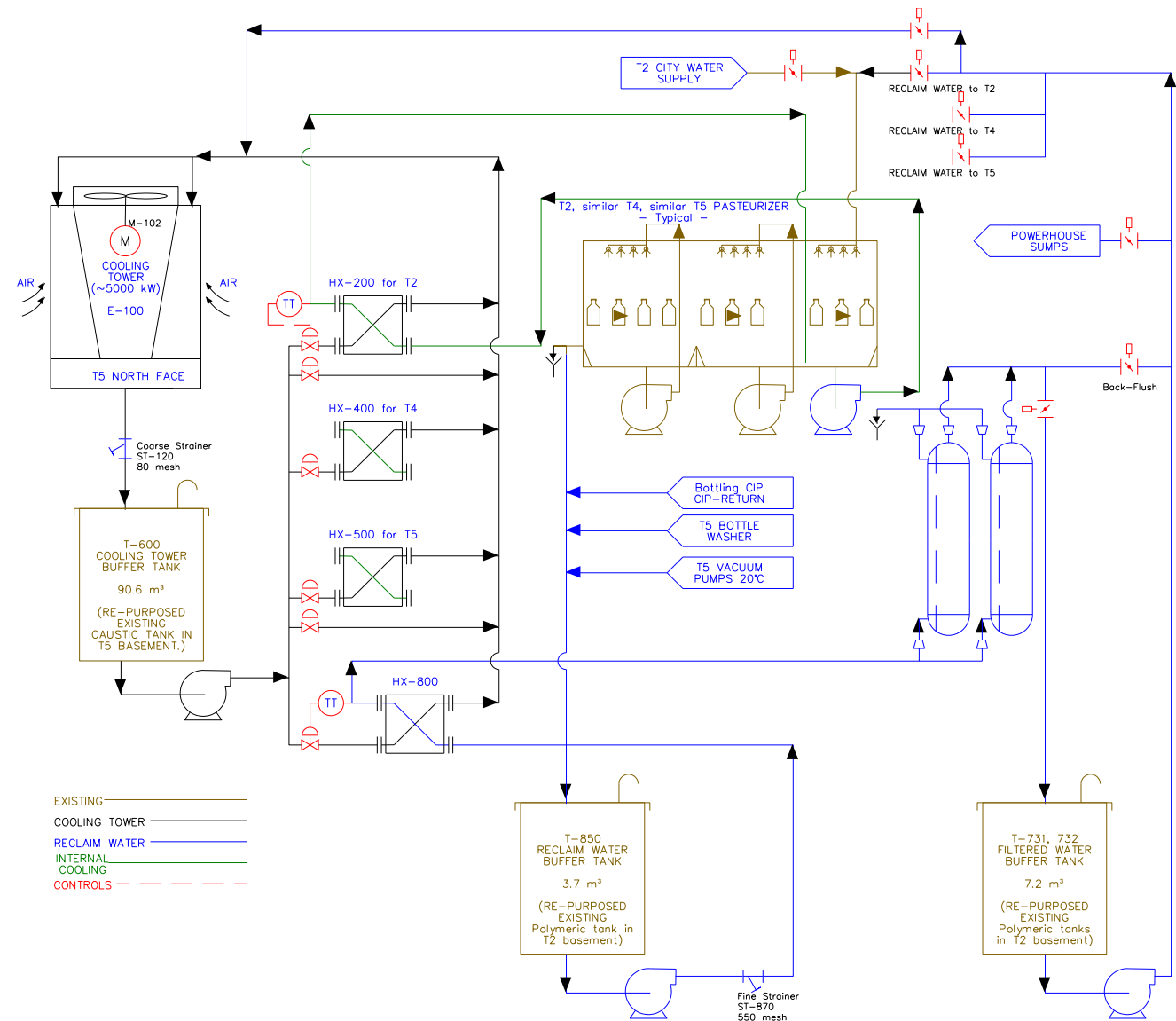
# Site Specific Sustainability Highlights – PKG Cooling and Reclaim Water System

## Closed Loop Cooling

- Pasteurizers utilize cooling tower circuit to maintain cooling zone temperatures (vs. city water addition)

## Pasteurizer Overflow Reclaim and Use

- Pasteurizers overflow routed to reclaim (ultrafiltration system) and reused in:
  - Evaporative Cooling Loops [water avoidance: 60,000,000 L/year]
  - Pasteurizer Make-up (**Future**) [water avoidance: 19,900,000 L/year]



# Site Specific Sustainability Highlights

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## Shift from Plastic Ring Package to Cardboard Wrapper

- 2021: shift to sustainable (PCR) plastic rings
- 2022/23: Westrock packer installation, complete removal of plastic rings, shift to cardboard packaging wrapper
  - \$85 million investment commitment to eliminate plastic ring packages within MolsonCoors



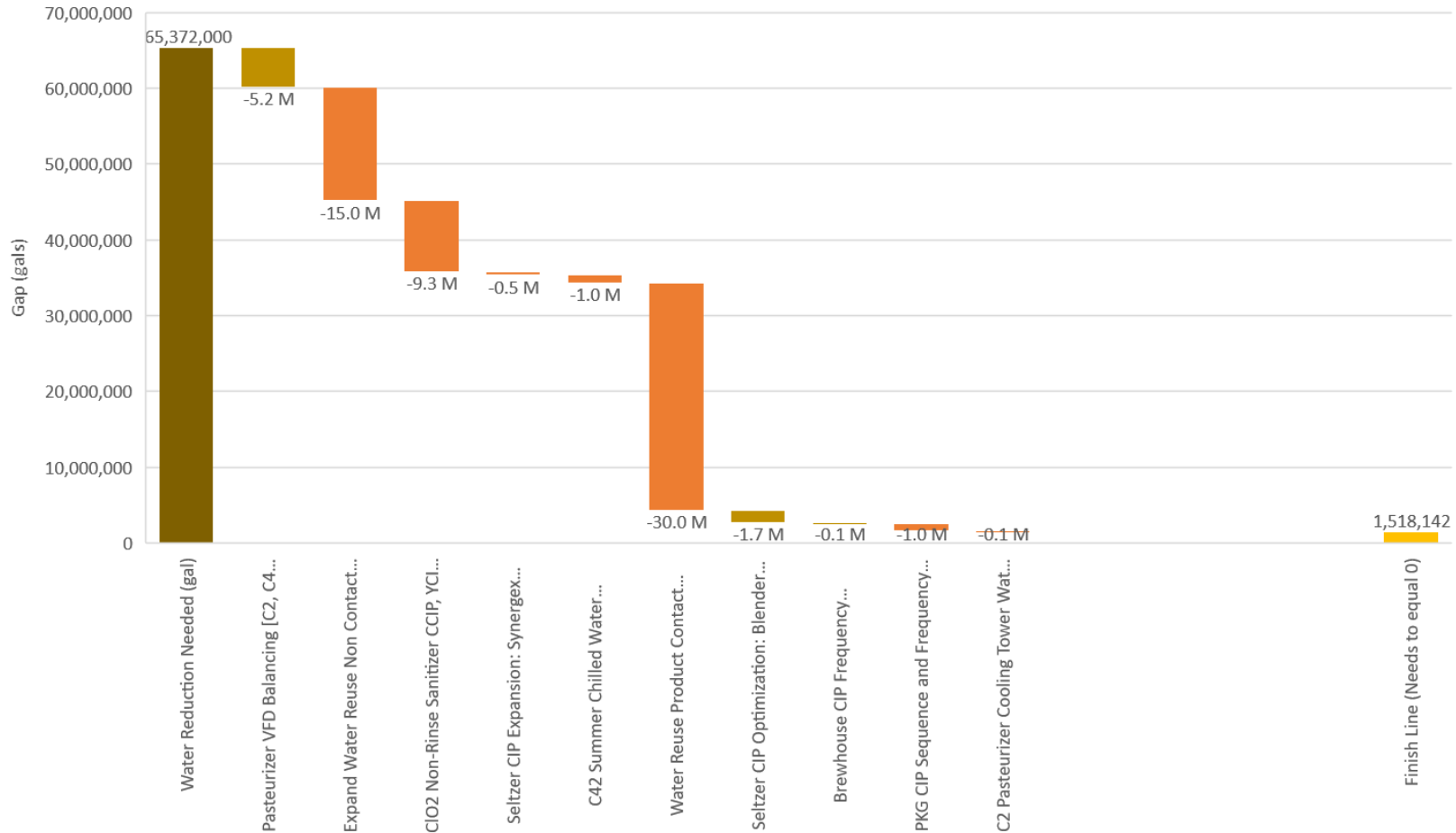
## Minimization of Single Use Plastic

- 400,000 lb/year reduction in single use plastic (as an organization)

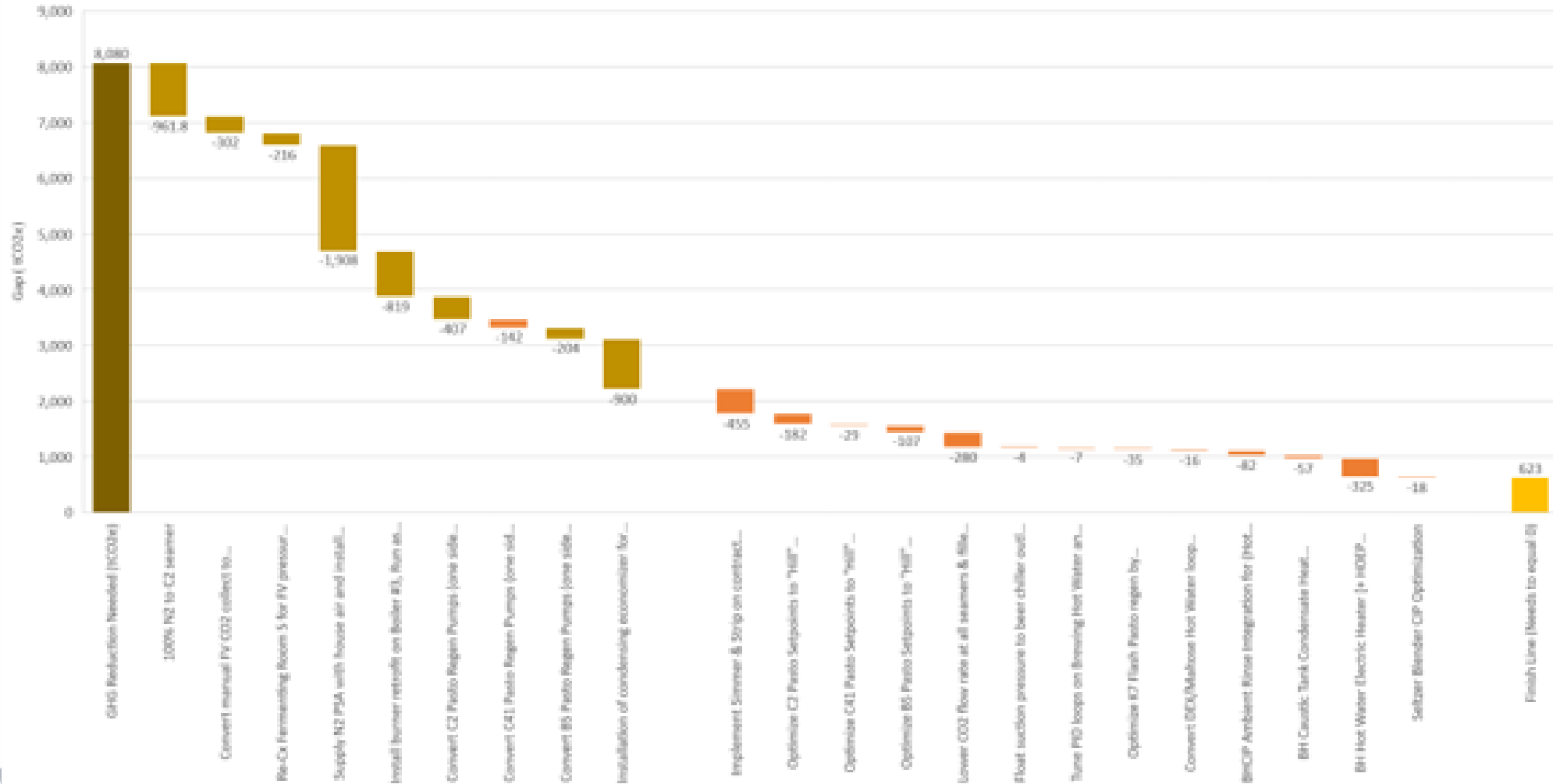


# Site Specific Sustainability Highlights – Future

## 2025 Gap Analysis - Water



# Site Specific Sustainability Highlights – Future 2025 Gap Analysis - Fuel



# Q&A and Discussion

- Update the group on recent **achievements**
- Relay **ongoing projects**
- Bring forward current **opportunities and challenges**
- Identify potential **collective action** projects





**Quantify Environmental  
Ltd Presentation  
(see separate PDF)**





# Molson-Coors Facility Tour



# Closing Remarks



## Partners in Project Green

A Program of Toronto and Region Conservation Authority



# Thank You!