Board of Directors Meeting Highlights
Held on April 20, 2023 at 5:00 PM
in the Board Room at the Material Recovery Facility

Bluewater Recycling Association

Michigan Changing Strategies for Garbage Disposal as Some Landfills Near Capacity

Michigan hasn't built a new landfill in more than two decades. That's not likely to change dramatically as new laws supported by the administration of Gov. Gretchen Whitmer make it tougher than ever to build new facilities. Yet existing landfills in populated areas like Lansing and Detroit are nearing their capacity, the state continues to bury record amounts of trash while Michigan recycles only about half as much as the national average.

Parts of Michigan are nearing landfill capacity, signaling that it's time to think about what's next, said Bob Gardner, a landfill consultant with SCS Consultants, which works in a number of states including Ohio, Wisconsin and Texas. He points out that it can often take 10 to 20 years for a landfill to go from concept to taking the first load of waste, "Most haulers don't want to transport their waste over 25 to 30 miles, and sometimes less depending on traffic issues," Gardner said. "Doing so results in too much off-route time."

It's a pattern across the country, said Timothy Townsend, a University of Florida professor whose work includes landfills. "Sometimes we're running out (of landfill space) right where we want it but we have a surprising amount further away." Michigan faces three choices, Townsend said: Waste less, which is important but likely not enough on its own; expand existing landfills in creative ways; or haul trash across the state to areas with more landfill capacity, like West Michigan or further north in Traverse City, at extra cost in time and fuel.

Reusable Food Container Bill Passes Oregon Senate

The Oregon Senate passed Senate Bill 545, a piece of legislation that will give consumers and businesses more flexibility to use consumer-owned food containers and reduce waste in Oregon. The bill, which passed with bipartisan support and was introduced and carried by Senator Janeen Sollman, (D-Hillsboro), updates regulations so restaurants can fill consumer-owned containers with food.

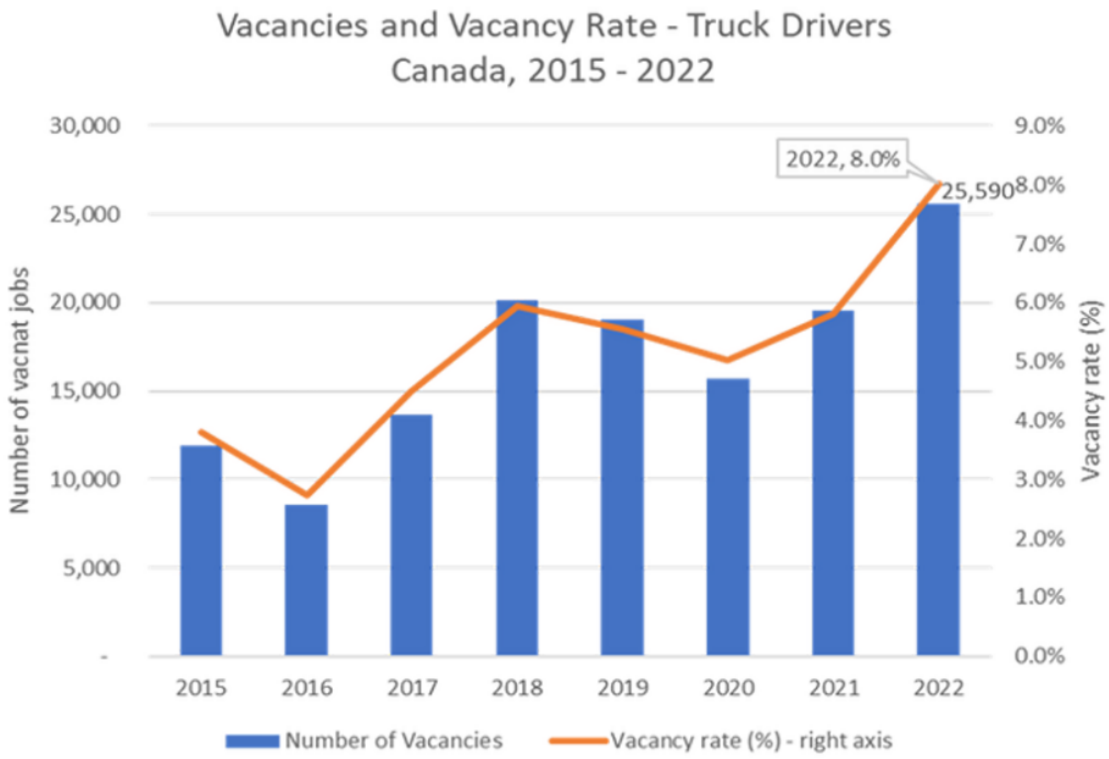
The Oregon Department of Agriculture has already gone through the process to allow consumers to bring reusable food containers to grocery stores. By passing Senate Bill 545, Oregon is taking a common sense next step towards reducing plastic waste and preserving our planet for future generations. Currently, Oregon only recovers 13.7% of plastic waste from landfills or incinerators, falling short of our goal of a 25% recovery rate.

Senate Bill 545 would direct the Oregon Health Authority to adopt rules allowing a restaurant to allow a consumer to fill a consumer-owned container with food. The bill will give consumers the choice to opt-out of single-use plastics, such as straws, utensils, and to-go containers, at restaurants and other food establishments.

Trucking Job Vacancies Increased Sharply In 2022: Trucking HR Canada

Trucking HR Canada's latest labor market information indicates Canada's truck driver shortage is worsening, with the vacancy rate for jobs in the truck transportation industry in 2022 more than tripling since StatsCan began collecting such data in 2015.

Vacancies are also more than twice as high as in 2019, prior to the Covid-19 pandemic, and the number of truck driver vacancies in 2022 reached an all-time high at nearly 25,600 vacant positions.



The unemployment rate among transport truck drivers in 2022 was 3.4%, with a gap between the demand for, and supply of, experienced drivers at 15,200 people.

"The ongoing labor shortages in transport truck drivers and other key occupations across the trucking and logistics sector continue to threaten the stability of the Canadian supply chain," said Craig Faucette, chief programs officer at Trucking HR Canada.

"Trucking and Logistics employers are working tirelessly to battle the labor shortages, and Trucking HR Canada is working to support their efforts through our innovative HR solutions, including online tools, and resources, interactive webinars, networking events across the country, as well financial supports for training, and wages."

The latest Labour Market Insights Special Vacancy Report does, however, show that truck driver vacancies declined in the fourth quarter, from 7.9% in Q3, to 6.9%. But the full year 2022 vacancy rate of 8% for truck drivers was up sharply from the 5.8% vacancy rate seen in 2021.

Statement from the Registrar: Used Tires Collection System

In the Spring of 2022, RPRA informed the tire producer responsibility organizations (PROs) registered with RPRA to provide services to tire producers in fulfilling their collection and management obligations under O. Reg. 225/18 (Tires Regulation) that their single shared public collection system had shortfalls in the required number of sites in various communities.

RPRA required these shortfalls in the system to be addressed or for each PRO to submit a compliant system on behalf of their producers. Following this request, RPRA was made aware that there was no longer an agreement to share the system. By October 2022, the five PROs submitted four separate collection systems. The outcome of that examination determined all four collection systems are noncompliant with the Act and Tires Regulation, including:

- Shortfalls in the required number of sites in various communities for each collection system submitted; these shortfalls remained even when the systems were combined.
- In a stratified random sample of the collection sites 35% of the sites did not collect tires.
- In the same sample, of the remaining 65% of sites that did accept tires, half did not accept tires on rims, and half charged consumers for accepting used tires.

RPRA issued Compliance Orders to all tire PROs on April 5, 2023 requiring them to provide an external audit demonstrating a compliant collection system within two months of receiving the Compliance Order. The name of the auditor and the scope of the audit must be submitted within 10 days of the Compliance Order and approved by the RPRA Inspector. Compliance Orders have been issued to the following tire PROs:

- eTracks Tire Management Systems
- Mobius PRO Services
- Reclay PRO
- Ryse Solutions Inc.
- YESS Environmental Services & Solutions Inc.

If a tire producer's PRO is unable to demonstrate it has a compliant collection system then that PRO's producer clients may be subject to enforcement action for failure to meet collection system requirements under the Act and Tires Regulation.

Contraventions of the collection system requirements are subject to administrative penalties that could include:

- The maximum base penalty amount for each producer that fails to satisfy collection system requirements set out in s. 6 to 10 of the Tires Regulation is $200,000 plus economic benefit, which is the value of the benefit gained from breaking the law.
- The maximum base penalty amount for each producer that fails to satisfy requirements relating to the obligation to ensure no charge is imposed for collecting tires, as set out in s. 68(3) of the RRCEA, is $75,000 per collection site plus economic benefit, which is the value of the benefit gained from breaking the law.

It should be noted that if no tire PRO submits a collection system that satisfies the number of collections sites required under the Tires Regulation or there is no agreement to share systems, producers may be required to engage with multiple PROs to fulfil their collection system requirements.

RNG Framed As 'Low Risk' Option To Slash Truck Emissions

The journey to zero emissions has begun, but several energy sources including renewable natural gas (RNG) will be needed to reach the goal. There is not one solution that can replace diesel. There's got to be a mix, depending on the geography, depending on availability, depending on the application of the trucks.

The need for such options becomes increasingly important against a backdrop of ever-tighter emissions standards and the limited ranges of emerging battery-electric options. Ninety-seven percent of heavy trucks continue to be powered by diesel, and in Europe the share even increased by half a percentage point from 2021 to 2022.

It is possible to decarbonize the land transportation sector by 2050 if you apply the right mix of technologies and energy alternatives.

RNG, for example, can reduce carbon dioxide emissions by 80-200% on a well-to-wheel basis, considering how the fuel is produced, and be delivered using traditional natural gas pipelines. Today, 64% of the natural gas used for U.S. transportation is renewable. In California, the share is 98%.

California fleets that fueled with bio CNG [compressed natural gas] in 2021, they achieved carbon negativity for the second full year in a row with an annual average [carbon intensity] score of -44.41 – that's lower than any other fuel and the only carbon-negative outcome mix in the entire [Low Carbon Fuel Standard] program.

Diesel faces a tough battle. The U.S. Environmental Protection Agency's Clean Trucks Plan is slashing NOx limits to 0.035 grams per horsepower-hour in 2027, which will drive up the cost of diesel equipment.

Decarbonization of the heavy-duty transport sector must begin now. We recognize that there is no one size-fits-all clean-energy solution, but the path to decarbonization can be accelerated immediately by targeting the high-emitting longhaul heavy-duty transport segment and RNG solutions leverage technology, infrastructure and an energy source that is readily available today.

The introduction of big-bore natural gas engines, namely Cummins' plans for a 15-liter offering, represents one of those technologies. Today there are more than 100 mature natural gas vehicle offerings produced by 15 OEMs in the European Union and North America.. And the 15-liter engine will see natural gas emerge as an option for the heaviest on-road vehicles.

The fuel has already proven itself in lighter applications. UPS, for example, has been running 12-liter natural gas engines since 2012, after a pilot project showed they could run more than 950 km without refueling. In 2013, natural gas was also US$2 per gallon cheaper than diesel, and the trucks were using 20,000 gallons of fuel per year. Even the natural gas fueling infrastructure was designed to last 20 years.

Last year, the fleet had more than 60 natural gas fueling stations, 4,000 heavy-duty natural gas trucks, and 6,000 medium-duty natural gas trucks. The fuel also continues to offer a $2 per gallon benefit over diesel in some jurisdictions.

For heavy-duty fleets, from well to wheel, RNG is the only alternative to diesel that has the potential for significantly reducing carbon emissions while also meeting financial targets and operational demands… It's low-risk. No other technology is even close.

Irving Oil To Import Digester-Produced RNG

Irving Oil and global waste-to-renewable natural gas (RNG) industry producer Anaergia Inc. have announced a partnership that will supply Canada's largest refinery with carbon-negative RNG, as well as Irving Oil's other operations.

About 350 million cubic feet of RNG will be supplied annually from Anaergia Inc. into the regional pipeline where it will reduce the need for conventional natural gas supply to Irving Oil's operations, including the Saint John refinery in New Brunswick.

The RNG will be produced at Anaergia's Rhode Island Bioenergy Facility, where food waste and other organic wastes that would otherwise have been landfilled, are transformed into renewable fuel.

This RNG is recognized as carbon-negative due to its ability to capture more methane emissions than the organic waste would have otherwise created when landfilled. In this way, Anaergia's Rhode Island Bioenergy Facility prevents the release of more than 40,000 metric tonnes per year of carbon dioxide-equivalent greenhouse gas emissions.

The Rhode Island Bioenergy Facility, located near Rhode Island's central landfill in Johnston, is designed to divert over 100,000 tons per year of waste from landfills and it is the largest anaerobic digester processing organic waste in New England. This facility converts food scraps plus some other organic wastes, into fertilizer, recycled water and RNG. The nutrient-rich solid residual of the digestion process is utilized to enrich New England soils and to reduce the use of fossil fuel-derived fertilizers.

Irving Oil said the use of diverted landfill waste converted into RNG is helping the company achieve its sustainability goals. The company operates Canada's largest refinery in Saint John, New Brunswick, and Ireland's only refinery.

EPA New Proposed Emissions Standards for Heavy-Duty Vehicles

A set of proposed standards announced by the EPA, the "Greenhouse Gas Standards for Heavy-Duty Vehicles – Phase 3," would apply to heavy-duty vocational vehicles (such as delivery trucks, refuse haulers or dump trucks, public utility trucks, transit, shuttle, school buses) and trucks typically used to haul freight. These standards would complement the criteria pollutant standards for MY 2027 and beyond heavy-duty vehicles that EPA finalized in December 2022 and represent the third phase of EPA's Clean Trucks Plan.

These "Phase 3" greenhouse gas standards maintain the flexible structure that EPA previously designed through a robust stakeholder engagement process to reflect the diverse nature of the heavy-duty industry. Like the light- and medium-duty proposal, the heavy-duty proposal uses performance-based standards that enable manufacturers to achieve compliance efficiently based on the composition of their fleets.

The projected net benefits of the heavy-duty proposal range from $180 billion to $320 billion. The proposal is projected to avoid 1.8 billion tons of CO2through 2055, equivalent to eliminating all greenhouse gas emissions from the entire current U.S. transportation sector for an entire year, and deliver additional health benefits by reducing other pollutants from these vehicles. The standards would result in improved air quality nationwide, and those who live near major roadways and are disproportionately exposed to vehicle pollution and heavy-duty activity, which often includes low-income populations and communities of color, would benefit most directly.

Canada Infrastructure Bank funds Quebec biorefinery

The Canada Infrastructure Bank (CIB) is providing a loan of $277 million to help finance the construction of a biorefinery and electrolyzer in Quebec.

Under the terms of the agreement, the CIB will help fund a joint-venture partnership between Shell, Suncor, Proman and the government of Québec that will enable construction of Canada's largest biorefinery, based on a technology platform developed by Enerkem.

The $1.2 billion facility – known as Varennes Carbon Recycling – will include an electrolyzer which will supply clean hydrogen and oxygen to convert more than 200,000 tonnes of non-recyclable waste and residual biomass into biofuels with a capacity of up to 130 million litres annually. The renewable methanol produced will be used primarily for marine transportation.

The project is expected to create more than 500 jobs at the peak of construction and about 100 permanent jobs once operational. Construction has already started and the facility is expected to be operating by 2025.

The project will be using Enerkem's proprietary thermochemical process. The carbon recycling facility is expected to cut more than 170,000 tonnes of greenhouse gas emissions annually and 4.25 million tonnes over the project's 25-year lifespan. The annual reduction is equivalent to taking 50,000 passenger vehicles off the road.

"We are pleased with the support of the CIB to Varennes Carbon Recycling that now combines the electrolyzer with the biorefinery into one single project," said Dominique Boies, CEO of Enerkem.

"CIBs participation enables this first-of-a-kind, fully commercial project, based on Enerkem's waste to methanol technology platform. This sends a powerful signal to investors and the biofuels and circular chemicals sectors."

New Way To Dispose Of Your Waste At Masonville Food Court

If you've been to the food court at Masonville Mall in London recently, you may have noticed a new way of clearing off your tray. Guests who have finished their meals can bring a tray to the sorting station where trained staff will separate materials, effectively diverting food waste from landfills. The new "low-waste dining halls" feature two main components, a sorting station and advanced organic composter.

According to Cadillac Fairview, the parent company of Masonville Mall, the low-waste dining halls are a proactive response to combating waste ahead of the projected Ontario organics landfill bans and Canada Zero Plastic Waste ban in 2030.

The sorting stations are constructed from 95 per cent recycled plastic, 85 per cent recycled metal and 65 per cent recycled quartz.

Advanced organic composting technology will significantly improve organics recycling and reduce the volume of organics materials by up to 80 per cent.

Ontario Launches New Ultra-Low Overnight Electricity Price Plan

The Ontario government is launching a new Ultra-Low Overnight price plan as part of its plan to provide consumers with more ways to keep costs down, save money and take control of their energy bills. Starting May 1, 2023, customers of Toronto Hydro, London Hydro, Centre Wellington Hydro, Hearst Power, Renfrew Hydro, Wasaga Distribution, and Sioux Lookout Hydro can opt-in to this new optional electricity price plan, with all utilities required to offer it to customers within six months.

The new electricity pricing structure is a third option for electricity customers, in addition to the existing Time-of-Use (TOU) and Tiered plans. Customers that use more electricity at night, including shift workers and those that electrically heat their home or charge their electric vehicle, could save up to $90 per year by shifting demand to the ultra-low overnight rate period when province-wide electricity demand is lower.

The new ultra-low overnight rate, set by the Ontario Energy Board, will be 2.4 cents per kilowatt-hour (kWh), which is 67 per cent lower than the current off-peak rate, in exchange for a higher on-peak rate.

Delivery of this new ultra-low overnight rate is possible as Ontario continues to have excess clean electricity during overnight hours. Shifting electricity use to these hours will allow the province to better leverage Ontario's clean electricity grid, increasing grid efficiency, resulting in potential capacity cost savings for the electricity system of up to $5.7 million per year, helping to reduce costs for all Ontario ratepayers.

As Ontario's electricity demand continues to grow, the government will continue to provide electricity relief for both people and businesses while investing in a clean and reliable energy system across the province.

As more and more people across the province begin to use EVs, the Ultra-Low Overnight price plan will make it easier and less expensive to charge their vehicles in the evening,

Quick Facts

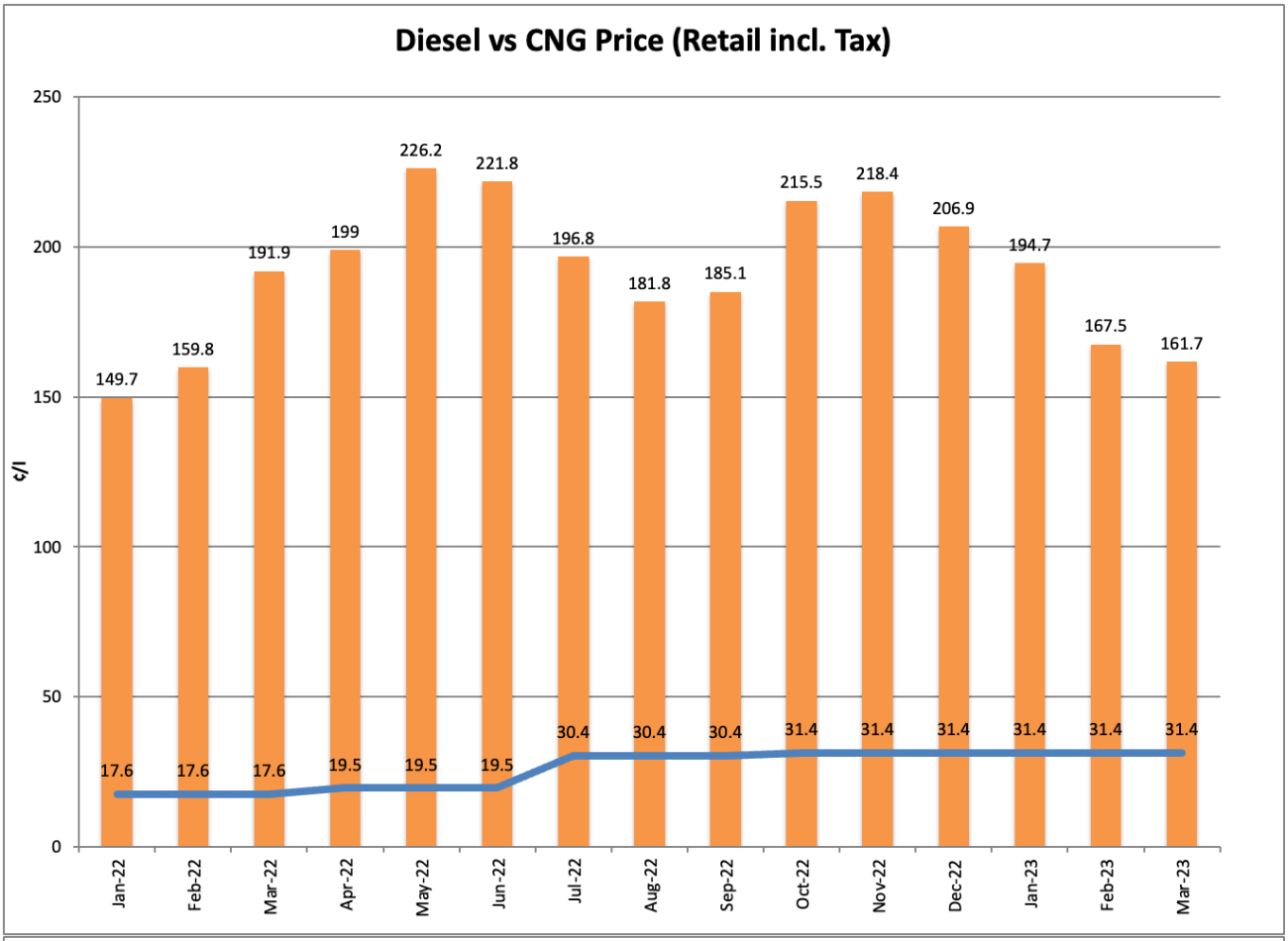
The new optional Ultra-Low Overnight price plan provides:

- Ultra-low overnight rate of 2.4 cents per kWh: everyday 11 p.m.-7 a.m.
- Mid-peak rates of 10.2 cents per kWh: weekdays 7 a.m.-4 p.m. and 9 p.m.-11 p.m.
- On-peak rates of 24.0 cents per kWh: weekdays 4 p.m.-9 p.m.
- Weekend off-peak rates of 7.4 cents per kWh: weekends and statutory holidays 7 a.m.-11 p.m.

The new optional third price plan is available to all eligible Regulated Price Plan (RPP) TOU and Tiered consumers.

Families and small businesses can use the Ontario Energy Board's Bill Calculator to determine what electricity rate plan, Tiered, Time-of-Use or Ultra-Low Overnight, best suits their lifestyle and will help them save money on their energy bills.

An ultra-low overnight rate will help reduce emissions by encouraging the use of more nighttime electricity, which is typically generated from clean, zero-emissions resources like nuclear, hydro and wind power.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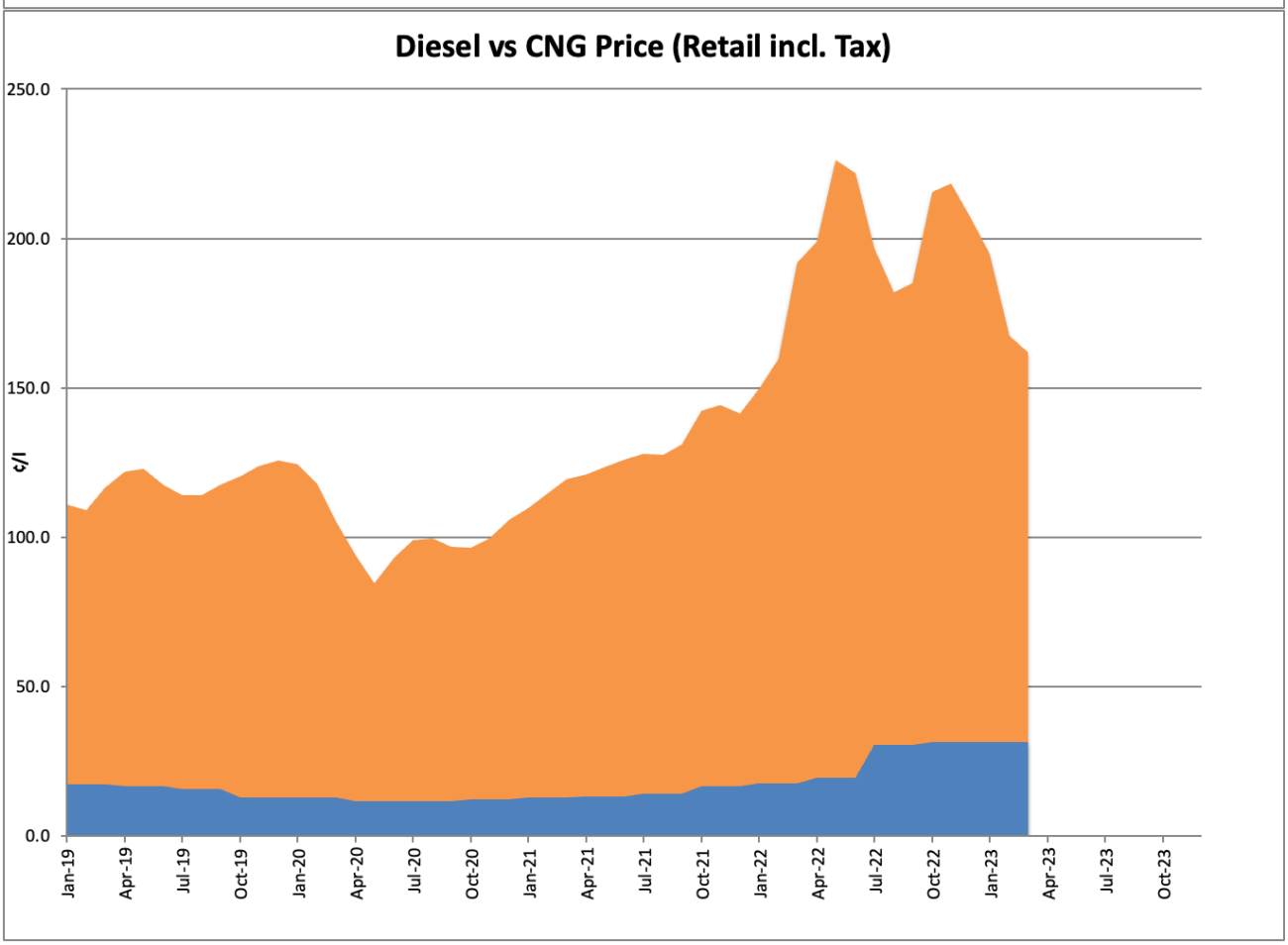
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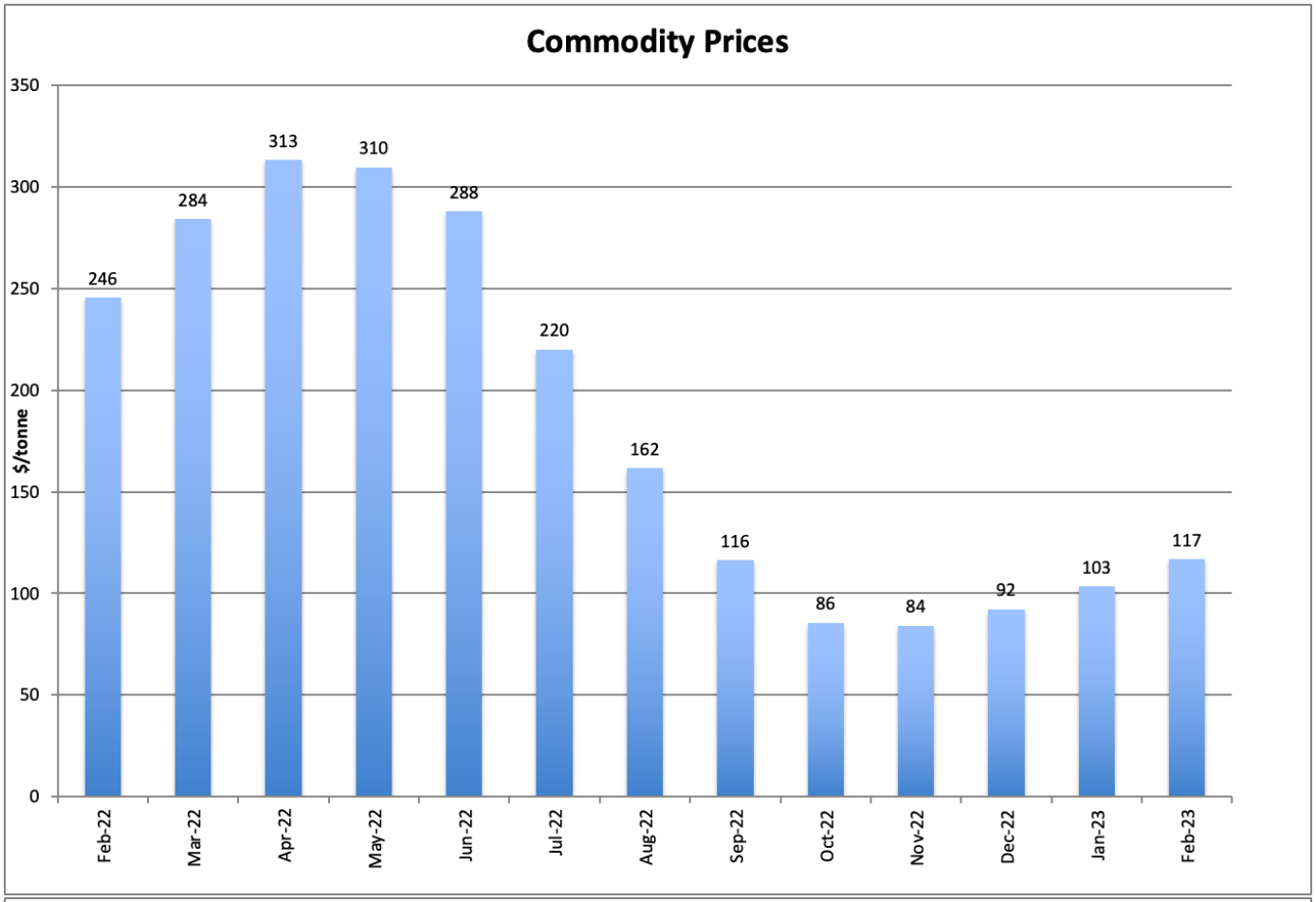
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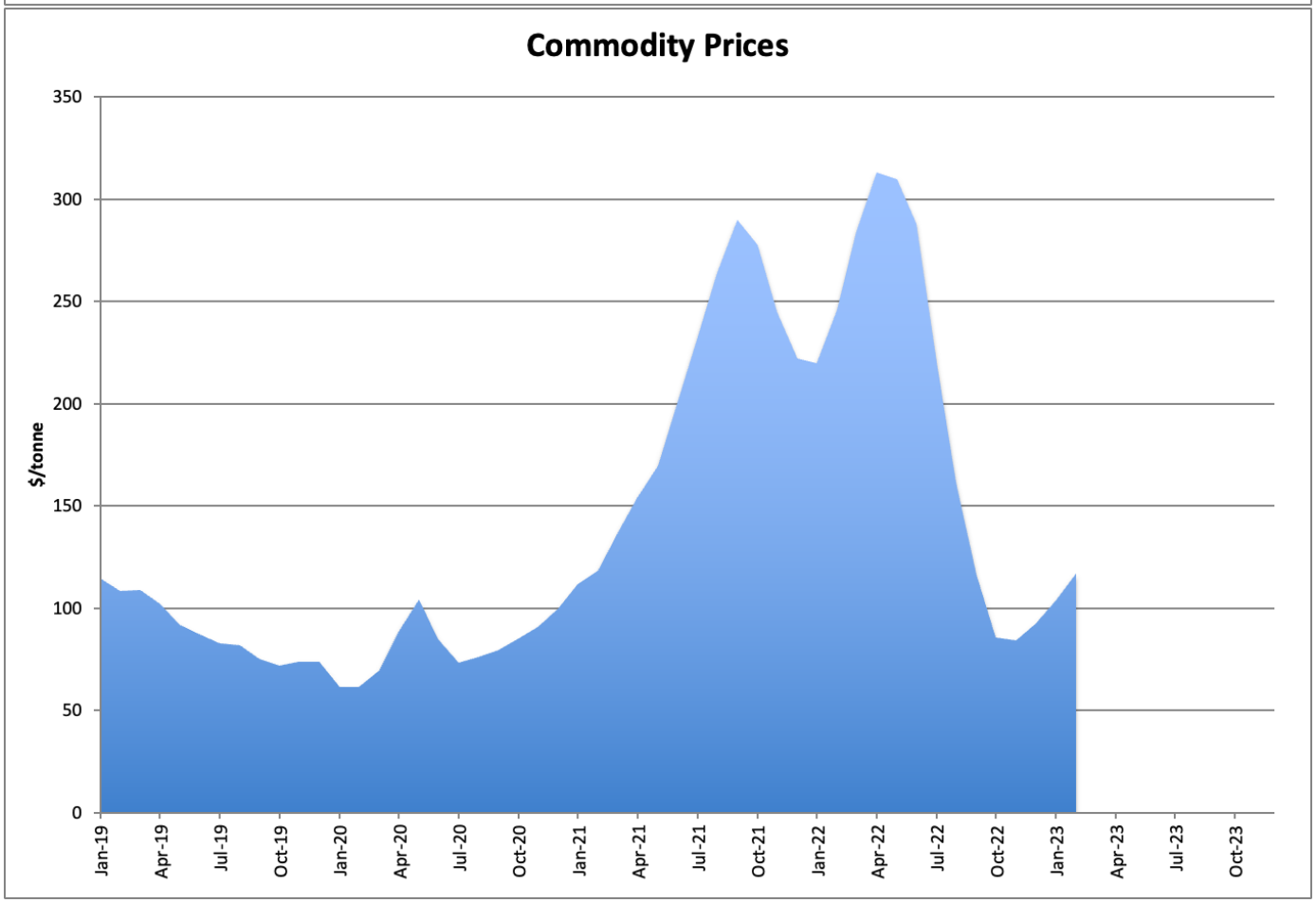
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