environmental defence

April 12, 2021

Isabelle Dufour, Clerk
Standing Committee on Environment and Sustainable Development
Sixth Floor, 131 Queen Street
House of Commons
Ottawa, ON K1A 0A6

Sent by email to ENVI@parl.gc.ca

Re: Study on single-use plastics

Dear Mme Dufour:

Please accept the following written submission from Environmental Defence related to the committee's study on single-use plastics.

Introduction

> *"A reduction of plastic production— through elimination, the expansion of consumer reuse options, or new delivery models—is the most attractive solution from environmental, economic, and social perspectives. It offers the biggest reduction in plastic pollution, often represents a net savings, and provides the highest mitigation opportunity in GHG emissions."*[1]

It is overdue for the Government of Canada to use its regulatory authority to manage the full lifecycle of plastics in order to protect the environment and human health from pollution that plastics generate. Nearly five million tonnes of plastics are introduced into the Canadian market each year and, every day, more than 8,000 tonnes of plastic waste end up in landfills, incinerators or the environment.[2]

The shift away from single-use plastics offers job creation opportunities that support new models for packaging and reuse systems as well as for improved recycling. Such opportunities can require much less capital investment than petrochemical infrastructure and, if they replace the use of virgin plastics, stand to reduce greenhouse gas emissions related to packaging.

[1] The Pew Charitable Trusts and Systemiq, *Breaking the Plastic Wave: A comprehensive assessment of pathways towards stopping ocean plastic pollution,* 2020, accessed at: https://www.pewtrusts.org/-/media/assets/2020/07/breakingtheplasticwave_report.pdf

[2] Environment and Climate Change Canada, *Economic Study of the Canadian Plastics Industry, Markets and Waste (Summary)*, Report prepared by Deloitte, 2019, accessed at http://publications.gc.ca/site/eng/9.871296/publication.html

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There is no room for debate about the environmental damage caused by plastic pollution. Studies from around the world, including the Canadian government's own *Science Assessment*,[3] have identified the damage and death caused to wildlife by macroplastics in the environment and the pervasiveness of microplastic particles in insects, animals, soil, marine and freshwater environments in every corner of the globe.

Jurisdictions around the world, including the European Union, China, Kenya and Australia, as well as dozens of Canadian municipalities, are regulating plastics in order to address the damage caused by plastic pollution. In addition to reducing pollution, these regulatory developments are expected to soften market demand for plastics. As a result, the federal government should adopt worker- and community-friendly policies that help shift the economy away from resource extraction and petrochemical production and toward environmentally-friendly services that treat commodities as resources and not as waste to be buried or burned.

Recommendations

Environmental Defence co-signed a letter[4] with 30 organizations in February urging the Canadian government to move ahead without delay on the plan to list plastic manufactured items in Schedule 1 of *CEPA* and proceed with banning single-use plastic items.

In addition, Environmental Defence urges the Government of Canada to:

- establish a minimum requirement of at least 30 per cent recycled content for all plastics by 2025;
- set and enforce high, material-specific recycling targets for plastics and aim to phase out all single-use plastic manufactured items that are not mechanically recyclable by 2030;
- require that producers be financially and operationally responsible for their products' end-of-life;
- establish an enforceable collection target for plastic beverage bottles and introduce targets for refillable beverage containers;
- support the shift toward reusable packaging and products by adjusting federal procurement programs to reusables as soon as possible and by supporting municipal governments who adopt equivalent or better reuse standards;

[3] Environment and Climate Change Canada, Health Canada, *Science Assessment of Plastic Pollution,* 2020, accessed at https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/science-assessment-plastic-pollution.html

[4] https://d36rd3gki5z3d3.cloudfront.net/wp-content/uploads/2021/02/NGO-letter-on-Plastic-Pollution-and-Listing-under-CEPA-Feb-11-2021-final-with-supporting-NGOs.pdf

- Establish a public registry, with annual reporting requirements for all producers, importers, waste management organizations and processors that includes the description, total mass, number of units (as applicable), chemical composition, additives, end-of-life disposition including manner in which it is processed, of each plastic manufactured item that is manufactured, imported, sold, exported and processed at end of life in Canada;
- impose restrictions on bio-based and so-called compostable plastics, including an immediate ban on oxo-degradable products and packaging;
- reject recovery, incineration, energy-from-waste, waste-to-fuel, pyrolysis and other thermal treatments as ways to manage plastic waste; and
- end subsidies to the oil and gas industry, including for petrochemical projects, and ensure a just and fair transition for the workers and communities that currently rely on it.

The myth of environment versus economy

Environmental Defence rejects the premise that regulating to protect the environment has a negative impact on the economy. Public and private investments are driven by public policy and regulation, or lack thereof, and it is the role of the government to shape such investment for the long-term health of the population, the eco-systems we rely on for life, and the economy. There is a global consensus on the need to shift from fossil-fuel based energy in favour of a reduction in energy consumption and of renewable sources of energy. Public policy around the world is now focused on "decarbonizing" the economy in order to limit average temperature increases on the planet and stifle carbon-based climate change.

The human and environmental need for a transition away from carbon applies as much to the petrochemical industry as to the fossil fuel industry as a whole. Plastics, an important segment of the petrochemical industry, have experienced enormous growth since the 1950s and, unless current trends are managed downward, production of plastics is expected to double from the current 400 million tonnes per year in 20 years.[5]

A 2020 report estimated that the global plastics value chain, from production to use to disposal, contributed 850 million tonnes of greenhouse gases to the atmosphere in 2019, the equivalent of 189 five-hundred-megawatt coal-fired power plants.[6] If trends continue, plastic will account for 20 per cent of oil use and 15 per cent of the

[5] Lebreton, L., and Andrady, A. "Future scenarios of global plastic waste generation and disposal," *Palgrave Commun* 5, 6 (2019). Accessed at https://www.nature.com/articles/s41599-018-0212-7

[6] Rethink Plastic, Bellona, Zero Waste Europe. *Counting carbon: a lifecycle assessment guide for plastic fuels*, 2020, accessed at https://rethinkplasticalliance.eu/wp-content/uploads/2020/01/rpa_bellona_zwe_counting_carbon.pdf

global annual carbon budget by 2050.[7] With some 40 per cent of plastics designed to be used once and thrown away, and difficult to recover and recycle, plastics are piling up in the environment. A study commissioned by the Canadian government estimated the replacement cost of the discarded plastic in 2016 alone was $7.8 billion for virgin material.[8]

Carbon Tracker Institute, a UK-based financial think tank, is warning investors away from plastics investment[9] precisely because of the shift in global public policy away from a fossil-fuel-based linear economy that takes, makes and wastes, toward a circular economy that focuses on reducing the use of virgin resources and keeps those that are needed in circulation through reuse and recycling. The think tank warns that the plastics industry is already over capacity and risks stranding assets that are no longer needed as the world shifts away from petroleum and plastics.

An April 2021 report for investors from As You Sow notes that petrochemical projects in the U.S. have been cancelled or delayed, including a delay of projects worth $17 billion in the Gulf Coast region, due to uncertainty about the outlook for plastics.[10]

The promise of a 3 R economy

As a result, fossil fuel industries should prepare and plan for a decline in investment and employment as the world pushes to reduce carbon emissions. Economist Jim Stanford has argued in a report commissioned by Environmental Defence that the transition away from fossil fuels is a reality that must be managed to ensure a just and fair transition for the workers and communities that currently rely on fossil-fuel-based jobs and investment.[11] In other words, with the right public policy, a shift from a carbon-based economy, including plastic production, will not be painful for Canadians. But if, instead, we plan for, and invest in, more plastics and more oil in a world of declining demand, workers and communities stand to be subjected to severe hardship.

Fossil fuel extraction, refining, storage and transportation is capital intensive, meaning there are fewer jobs for every million dollars in value created in those

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[7] World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company, *The New Plastics Economy — Rethinking the future of plastics* (2016, http://www.ellenmacarthurfoundation.org/publications).

[8] ECCC, 2019, cited above.

[9] Carbon Tracker Institute, *The future's not in plastics,* 2020, accessed at https://carbontracker.org/reports/the-futures-not-in-plastics/

[10] Holzman, L., Romo, J. "Plastics: the last straw for big oil?" As You Sow, 2021, accessed at https://static1.squarespace.com/static/59a706d4f5e2319b70240ef9/t/606e06e4ef4b73289186554e/1617823470000/AsYouSow2021_Petrochemical2021_v4_20210401.pdf

[11] Stanford, Jim, *Steady Path: how a transition to a fossil-free Canada is in reach for workers and their communities*, 2021, available at https://environmentaldefence.ca/report/steady-path-transition-fossilfuel-jobs/

activities than in, for example, the service industry. Analyzing data from Statistics Canada, Stanford found that refined petroleum products employ 1.6 workers for every $1 million in GDP, compared with 7.9 jobs per $1 million for manufacturing, 8.8 for transportation, 13 for education and 14.5 for healthcare and social services.[12]

The European Union's 2020 report on the circular economy[13] notes a potential for reduction, reuse and recycling measures to increase EU GDP by 0.5 per cent by 2030 while creating 700,000 new jobs. The Global Alliance for Incinerator Alternatives (GAIA) found in a 2021 global study[14] that zero waste strategies involving repair, recycling and remanufacturing create more jobs than landfill and incineration. In fact, repair programs have the potential to create 200 times the number of jobs when compared to waste disposal.

Reuse

There is a clue in economist Stanford's research for governments looking to rebuild the economy and ensure job opportunities for those whose employment has been lost during the COVID-19 pandemic, particularly in the hospitality industry. Regulations limiting the use of single-use plastics should be complemented by supports and incentives for reuse systems, particularly for services such as takeout food and beverages, to replace single-use packaging.

The Ellen MacArthur Foundation estimates that replacing merely 20 per cent of single-use plastics with reusables around the world would generate USD $10 billion in economic activity.[15] In Canada, such a move would also make a significant dent in plastic waste, 47 per cent of which was packaging in 2016.[16]

One women-run start-up in Southwestern Ontario launched a deposit-based reusable container system for restaurant takeout meals in 2020. The small company offers local restaurants and their patrons the choice of reusable packaging and has already made possible the avoidance of 5,000 single-use takeout containers. Growth plans requiring a total investment of approximately $10 million involve adding 75 new full-time jobs over the next two years, including 15 office workers and 60 hourly employees.[17]

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[12] Stanford, 2021, p. 26

[13] European Commission, *A new Circular Economy Action Plan For a cleaner and more competitive Europe,* 2020, accessed at https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN

[14] GAIA, *Zero waste and economic recovery: the job creation potential of zero waste solutions*, 2021, accessed at https://zerowasteworld.org/wp-content/uploads/Jobs-Report-ENGLISH-2.pdf

[15] Ellen MacArthur Foundation, *Reuse: rethinking packaging*, 2019, accessed at https://www.ellenmacarthurfoundation.org/assets/downloads/Reuse.pdf

[16] ECCC, 2019, cited above

[17] Email exchange with Kayli Dale of A Friendlier Company, based in Guelph, Ontario

Compare that to a Montreal "biofuel" project announced for Montreal last December to which the governments of Quebec and Canada, as well as Hydro Quebec, are kicking in $424 million to turn waste, including non-recyclable single-use plastics, into ethanol fuel. The $875 million facility is slated to employ fewer than 100 workers on an ongoing basis[18] who will work directly with toxic materials in a polluting process[19] to manage waste that shouldn't be created in the first place. The money invested by the provincial and federal governments into this waste-to-fuel project could create four times the number of ongoing jobs if diverted to reuse organizations such as the one described above.

Recycling

Mechanical recycling is another job creator, providing many more jobs than waste disposal and incineration. A study of beverage container recycling in the US revealed that collecting single-use beverage containers through a deposit-return system and recycling the material creates more than 8 full-time equivalent (FTE) jobs per 1,000 tons of glass, plastic or metal containers, compared with landfilling the material, at 1.43 FTE jobs per 1,000 tons.[20] Further, recycling polyethylene terephthalate (PET), the material used for plastic beverage containers, generates 16.5 times the number of jobs of producing the equivalent amount of virgin plastic.[21] The study estimated that more than 70,000 net new jobs could be created in the US by implementing deposit-return systems, which are the most reliable source of sorted and uncontaminated material, and recycling the material collected. This increase is over and above any resulting loss of jobs in virgin material production and landfilling.

The federal government's economic study of plastics estimates that increasing sorting and recycling of plastic waste to 27 per cent from the current 7 per cent by 2030 would require 137 new sorting and recycling facilities.[22] While we disagree with the study's inclusion of energy-to-waste and "chemical recycling" of mixed waste in the diversion assumptions, there is no question that new sorting and mechanical recycling facilities needed to reach a high target for plastics recycling would create thousands of net new jobs as compared to landfill disposal. If recycled plastic replaces virgin feedstocks for new plastic production, the report also notes a corresponding decrease in greenhouse gas emissions.

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[18] See https://montreal.ctvnews.ca/governments-to-invest-in-875-million-biofuel-plant-project-southeast-of-montreal-1.5222116

[19] Enerkem's Edmonton plant, which processes up to 100,000 tonnes per year of mixed municipal waste, including non-recyclable plastics, reported to the *National Pollutant Release Inventory* for 2019 releases into the air of 21 tonnes of carbon monoxide and 12.66 tonnes of nitrogen oxides, among other air emissions. The company also reported 1472.9 kilograms of lead and 244.22 kilograms of arsenic sent for offsite disposal.

[20] Morris, J., Morawski, C. *Returning to work: understanding the domestic jobs impacts from different methods of recycling beverage containers*, report prepared for the Container Recycling Institute, 2011, accessed at http://productstewardship.net/sites/default/files/PDFs/libraryContainers-Jobs-CRI-Morawski-Morris-Dec2011.pdf

[21] Morris, J., cited above, p. 38

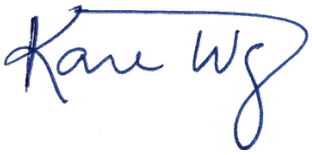
[22] ECCC, 2019, cited above

However, public policy is needed to ensure demand for recycled plastic. Bloomberg reports that it became cheaper to manufacture with virgin PET than with recycled PET in 2019 because of the low cost of virgin feedstock, in part due to U.S. subsidies for shale gas production, one of the major feedstocks of plastic polymers in North America.[23] It is not useful to impose higher targets for plastic recycling without also requiring that new plastic products contain a certain amount of recycled content.

Conclusion

The federal government's plan to manage plastic pollution in Canada, including the proposed bans on single-use items, is on the right track to improve outcomes for both the environment and the economy. In addition, we urge the federal government to implement additional regulation and incentives to shift from a linear plastics economy to a circular economy that focuses on reducing the use of virgin materials, promoting reuse, and recycling for a reduced number of plastic items that reach their end of life.

Yours sincerely,



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[23] Lee, J, "In the War Against Plastic, America Is a Big Threat," *Bloomberg*, October 6, 2019, accessed at https://www.bloomberg.com/opinion/articles/2019-10-06/america-s-shale-boom-is-a-threat-to-recycled-plastic-bottles