How Can Nova Scotia Claim Its Plastic Baggage?

A Study on Film Plastic

Maria K. MacDonald

Guysborough Academy

Grade 12

Executive Summary

The problem of over usage and the hazardous effects to the environment of film plastic in our society, is one that deserves much attention. As a result of the changes in international markets, Nova Scotia is now facing a stock pile of film plastic.

Municipalities must play a key role in the reduction of usage of this product. Educating residents and offering incentives to businesses and consumers is essential in this process. Residents must become responsible and accountable for the maintenance and health of their community.

The provincial government also has a role to play in solving this problem. The implementation of legislative enactment is critical if Nova Scotia is to emerge as a leader in banning the use of plastic grocery bags in a timely manner. As Nova Scotia struggles to find solutions to this immense environmental challenge, it must look to other provinces and nations for suggestions and answers. Nova Scotia can learn from European countries, such as Germany, that has been able to reduce the amount of its waste sent to landfill sites to 1%. This is incredible for a country of its population. We can also take lessons from the United States, who is embarking on new and innovative ways to create renewable energy from plastics. Plastics are being used in the creation of wind turbines, solar cells, and energy to fuel homes and vehicles.

Together we must strive to search for solutions for this issue that impacts all Nova Scotians. It is our responsibility to keep our environment healthy.

For many years, Nova Scotians have been using, disposing of, and recycling film plastic, in the form of grocery bags, bubblewrap, and packaging on food and other products, without ever giving it a thought. However, in 2018, it has come to our attention that there is no longer an international market for this product. This challenges us to think of new and innovative ways to deal with this issue, as there is quickly becoming a stock pile of plastic film in our counties.

Plastic film is typically defined as any plastic less than 10 mil thick. Plastic bags are made out of film or thin flexible sheets of plastic. The majority of plastic films are made from polyethylene resin, and are readily recyclable if the material is clean and dry (as cited in Plastic Film Recycling, 2018). As you can see, with approximately one million Nova Scotians using these products on a weekly, if not daily basis, this product will very quickly add up, particularly in our landfill sites and Waste Management Facilities. So, how can we overcome this challenge?

I feel it needs to start with education. It is key to engage the public and spread awareness about this important topic. Nova Scotians may be astonished to learn that it is estimated that Canadians use between 9 and 15 billion plastic shopping bags each year, of which between 300 and 500 million grocery bags are used in Nova Scotia alone (as cited in Plastic Bag Facts, 2017). Local municipalities could hire summer students to travel throughout their municipality educating community members about the hazards of film plastic to human, animal, and plant life. This could be done by setting up kiosks in grocery stores, health fairs, farmers markets, and community events. There also needs to be an incentive to motivate people to change, this could be in the form of monetary reimbursement. For example, when consumers bring their own cloth

shopping bags, the retailer can reward them financially. If they require plastic shopping bags for their purchase, a fee can be applied. Some retailers currently offer is reward, but more need to be encouraged to do so. For some people, the best motivation is financial gain, others will do it for the environmental benefits.

Often change is accepted more readily if it is phased in over time, as the municipalities did with blue bag recycling and curb-side composting. Using a phased in approach, allows people to adapt to change more readily. Now, most Nova Scotians recycle and compost on a daily basis, without questioning why. The same could be done for the elimination of plastic shopping bags. Municipalities need to be encouraged to pick a date, such as by 2020, that plastic shopping bags must be eliminated completely by retailers.

As an incentive to local businesses, municipalities could provide a number of cloth shopping bags to help defray the cost of initiating this process. Although there is a cost to this, the environmental rewards of this initiative to their municipality, far outweigh the financial burden of cloth bags. Local businesses could then implement a punch card incentive. For example, each time a consumer brings a cloth bag, they get a punch on their card. After nine punches, they get a free, environmentally friendly cloth bag. Local retailers may want to put their logo on their cloth bags as an advertising strategy.

The provincial government also has a key role to play in the reduction and elimination of plastic shopping bags. It is this governing body that has the power to legislate this policy.

Although Atlantic Canadians showed the highest support in the country for banning the distribution of single-use plastic bags by retailers; 63% of Atlantic Canadian participants supporting the idea (Denty, 2017), this does not mean we can sit back and be comfortable with these statistics, we must continue to strive to increase support in implementing this ban. As Nova Scotians, we need to put pressure on our Members of the Legislative Assembly (MLAs) to reach this goal. My local Municipality of the District of Guysborough has already supported a letter that was written to our provincial government to encourage the ban of single use retail shopping bags (Avery, 2018), and my school's Green Team, of which I Co-Chair, has committed to a goal of banning the usage of plastic bags in our community by the year 2020.

There are emerging new technologies that could create end markets for film plastic, literally in our own backyard. There is a company in Burnside, Nova Scotia, that is embarking on an adventurous, new market that is making lumber from waste plastic, including film plastics, from Nova Scotia. Halifax Construction and Debris Recycling Ltd. has purchased an extrusion machine that allows the recycler to shred and melt down plastics to create pucks. The pucks are then extruded further and made into boards, these boards could be used for decking on houses, and are three to four times stronger than wood. This exciting new technique is relying on using 4000-5000 tonnes of Nova Scotia's discarded plastic. The vision for this company is to create a business that markets plastic outdoor furniture (as cited by Campbell's article in the Chronicle Herald, April 2018). This project shows great promise for the citizens of Nova Scotia, as it is a business that shows strong potential and sustainability in our region.

There are several contributions that film plastics can make towards renewable energy. In the United States, plastics are playing a role in helping to reduce the environmental footprint of energy production. New technology is creating lightweight blades for wind turbines, from plastics. This wind energy produces electricity by spinning the turbine blades. The use of lighter weight plastic enables these blades to spin faster, becoming more energy efficient (as cited in Plastics Make it Possible, 2015).

Researchers are also working on creating solar cells made almost entirely of plastic. This research has potential to open up new possibilities for improved solar technology. This type of renewable energy would also be less expensive, and a viable option for consumers. (as cited in Plastics Make it Possible, 2015).

Another extremely exciting possibility of recovering energy from plastics, is through a process called, “pyrolysis”. This is a process whereby the plastics are heated and melted into a liquid, and then vaporized into gases. The gases are cooled and condensed into a variety of useful products, such as; synthetic crude oil, synthetic diesel fuel, and kerosene. The potential for these plastics powering our homes and cars instead of ending up in a landfill is huge. Some nations are far ahead of us in this technology. For example, Germany is using this type of energy recovery, and as a result, only 1% of this country’s waste ends up in its landfill (as cited in Plastics Make it Possible, 2017). Our province could benefit from examples like this.

We have an obligation as a society to protect our environment from the harmful effects of film plastic. It is hopeful that through the use of technology and creativity, that the amount of film plastics in Nova Scotia may be reduced and diverted into other reusable products. We must take immediate action.

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