
Plastics Industry Overview

Information for Canadian Companies to
Develop Export Opportunities in the United
States Tri-State Area

Introduction

This document is intended to assist Canadian companies in identifying potential opportunities in the United States plastics industry. The document is intended as an introduction to the market and a source for additional resources. Given the unique nature of each company, it is important that readers contact the most appropriate resources provided herein.

Industry Overview

The US plastics industry in 2003 remained at approximately the same level of production and sales as in 2002. This is reflective of the relatively poor country-wide economic conditions. For example, the plastics packaging sub-sector closely mirrors the performance of the retail sector. Therefore with poor retail sales follows poor packaging resin sales. It is anticipated that with improvements in the US and global economy in 2004, the plastics industry will see an increase in sales and production.

Given the diversity of production and customer markets for plastics products, details for sub-sectors are provided below along with links for additional sub-sector specific information.

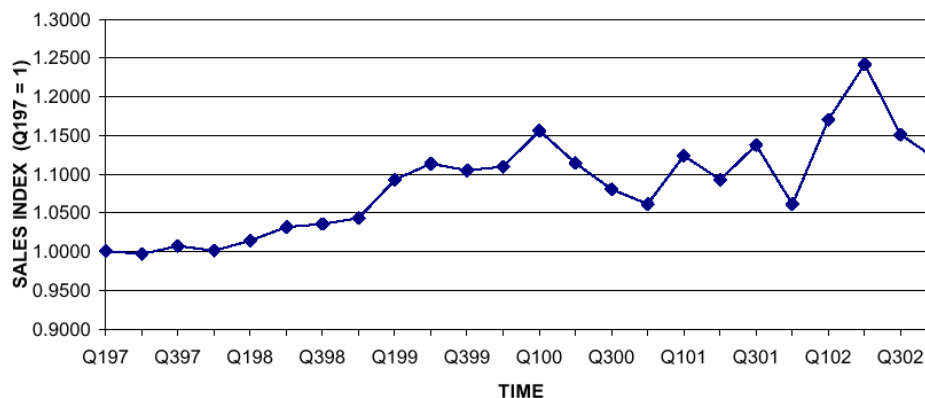
A complete summary of the North American plastics industry's performance in 2003 is available at www.apcnewsmedia.com/ Search for: *Seesaw Economic Recovery Leaves 2003 Plastics Volumes Flat*

Market Size and Growth

Aggregate Market Growth

Trend of Sales and Captive Use for Major Plastic Resins

(Total sales of all thermoset and thermoplastic resins, 1997 as base year)



SOURCE: APC Plastics Industry Producers' Statistics Group, as compiled by VERIS Consulting, LLC, 2003.

Market Size By Resin

APC Year-End Statistics For 2002

PRODUCTION, SALES & CAPTIVE USE
2002 vs. 2001
(millions of pounds, dry weight basis)(1)

Resin	Production			Total Sales & Captive Use		
	2002	2001	% Chg 02/01	2002	2001	% Chg 02/01
Epoxy (2)	655	601	9.0	620	597	3.9
Urea and Melamine (3)	3,219	3,040	5.9	3,197	3,021	5.8
Phenolic (3)	4,438	4,362	1.7	4,076	3,894	4.7
Total Thermosets	8,312	8,003	3.9	7,893	7,512	5.1
LDPE (2)(3)	8,040	7,697	4.5	8,086	7,642	5.8
LLDPE (2)(3)	11,329	10,272	10.3	11,429	10,747	6.3
HDPE (2)(3)	15,969	15,284	4.5	16,190	15,195	6.5
PP (2)(3)	16,956	15,934	6.4	17,084	16,135	5.9
ABS (2)(4)	1,315	1,217	8.1	1,455	1,317	10.5
SAN (2)(4)	130	127	2.4	112	127	-11.8
Other Styrenics (2)(4)	1,602	1,517	5.6	1,624	1,583	2.6
PS (2)(3)	6,669	6,114	9.1	6,768	6,223	8.8
Nylon (2)(4)	1,274	1,139	11.9	1,284	1,159	10.8
PVC (3)	15,297	14,257	7.3	15,250	14,626	4.3
Thermoplastic Polyester (2)(4)	7,247	6,898	5.1	7,480	6,972	7.3
Total Thermoplastics	85,828	80,456	6.7	86,762	81,726	6.2
Subtotal	94,140	88,459	6.4	94,655	89,238	6.1
Engineering Resins (3)(5)	2,734	2,542	7.6	3,042	2,639	15.3
All Other (6)	10,612	10,108	5.0	10,565	10,081	4.8
Total Engineering & Other	13,346	12,650	5.5	13,607	12,720	7.0
GRAND TOTAL	107,486	101,109	6.3	108,262	101,958	6.2

(1) Except Phenolic resins, which are reported on a gross weight basis.

(2) Sales & Captive Use data include imports.

(3) Canadian production and sales data included.

(4) Canadian and Mexican production and sales data included.

(5) Includes: acetal, granular fluoropolymers, polyamide-imide, polycarbonate, thermoplastic polyester, polyimide,

modified polyphenylene oxide, polyphenylene sulfide, polysulfone, polyetherimide and liquid crystal polymers.

(6) Includes: polyurethanes (TDI, MDI and polyols), unsaturated (thermoset) polyester, and other resins.

Sources: APC Plastics Industry Producers' Statistics Group, as compiled by VERIS Consulting, LLC; APC

Market Growth by Plastic Product NAICS Category

Description NAICS Category	% Change 2000-2002
Plastics Bags 326111	-5.8
Plastic Packaging Film and Sheet 326112	5.6
Non-packaging Film and Sheet 326113	-11.5
Plastics Profile Shapes 3216121	-0.7
Plastics Pipe & Pipe Fittings 326122	0.3
Laminated Plate, Sheet and Film 326130	-11.7
Polystyrene Foam Products 326140	16.2
Urethane and Other Foam Products 326150	-13.9
Plastics Bottles 326160	14.5
Plastics Plumbing Fixtures 326191	5
Resilient Floor Covering 326192	-15.5
Plastics Products, Not Elsewhere Classified 326199	-3.7

Source: Size and Impact of the U.S. Plastics Industry, The Society of the Plastics Industry, December 2003.

Note on NAICS Categories

The North American Industry Classification System (NAICS) is an updated version of the Standard Industrial Classification (SIC) system. Both group country wide production into defined segments. Although NAICS is a new system, both classifications remain in common use. See the Sales Development Section for more information about the SIC system.

Major Markets for Selected Resins

Total Sales & Captive Use of Selected Thermoplastic Resins* by Major Market, 1998-2002

(millions of pounds, dry weight basis)

<u>Major Market</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>Compound Growth Rate 1998-2002</u>
Transportation	3,588	3,632	3,872	3,595	3,753	1.1%
Packaging	19,396	21,210	21,289	22,574	23,616	5.0%
Building & Construction	12,077	13,793	13,520	13,231	13,839	3.5%
Electrical/Electronic	2,816	3,036	2,924	2,352	2,433	-3.6%
Furniture & Furnishings	3,293	2,885	2,993	2,879	3,076	-1.7%
Consumer & Institutional	11,031	11,645	11,505	11,219	11,861	1.8%
Industrial/Machinery	710	802	783	647	663	-1.7%
Adhesives/Inks/Coatings	1,758	1,753	1,715	1,675	1,664	-1.4%
All Other	9,211	10,189	9,456	10,134	11,600	5.9%
Exports	<u>8,114</u>	<u>8,178</u>	<u>9,583</u>	<u>9,084</u>	<u>9,820</u>	4.9%
TOTAL SELECTED PLASTICS:	<u>71,994</u>	<u>77,123</u>	<u>77,640</u>	<u>77,390</u>	<u>82,324</u>	3.4%

Note: Previously published versions of this table included sales by major market for thermosetting resins and for thermoplastic polyester (including PET bottle grade resins). These resins are now not included and this table now reflects selected thermoplastic resins only. Also, Export figures for 1998-2000 have been adjusted to provide a comparable trend for all years.

*Selected thermoplastics are:

Low Density Polyethylene	Nylon	Acrylonitrile-Butadiene-Styrene (ABS)
Linear Low Density Polyethylene	Polyvinyl Chloride	Styrene-Acrylonitrile (SAN)
High Density Polyethylene	Engineering Resins	Other Styrene-Based Polymers
Polypropylene	Polystyrene	Styrene Butadiene Latexes

Major market volumes are derived from plastic resins sales and captive use data as compiled by VERIS Consulting, LLC and reported by APC's Plastics Industry Producers' Statistics Group.

Definition of "Major Market" available at:

www.americanplasticscouncil.org/benefits/economic/pips_definitions.html

Tri-State Plastics Market

The Tri-State area (Connecticut, New Jersey, New York) comprise the 21st, 8th and 9th largest states for plastics shipments respectively, valued in total at over \$26B in shipments for 2001.

State	Industry Jobs (2001)	Industry Shipments (2001 \$B)
Texas	101,173	\$ 34.4
California	152,335	\$ 27.8
Illinois	100,103	\$ 22.4
Ohio	123,182	\$ 22.2
Michigan	109,275	\$ 21.5
Pennsylvania	82,271	\$ 16.1
New Jersey	51,011	\$ 11.7
North Carolina	57,248	\$ 11.5
New York	62,371	\$ 11.2
Georgia	39,682	\$ 10.3
Wisconsin	53,930	\$ 9.9
Louisiana	13,316	\$ 8.2
Kentucky	32,218	\$ 8.1
Massachusetts	41,779	\$ 8.0
Tennessee	40,344	\$ 7.3
South Carolina	28,384	\$ 5.9
Florida	31,750	\$ 5.7
Minnesota	34,410	\$ 5.7
Virginia	29,490	\$ 5.6
Missouri	30,003	\$ 5.2
Connecticut	17,002	\$ 3.6
Iowa	20,545	\$ 3.6
Alabama	18,230	\$ 3.4
Mississippi	17,034	\$ 3.4
Washington	20,010	\$ 3.4
West Virginia	7,869	\$ 2.9
Arizona	14,897	\$ 2.8
Arkansas	16,662	\$ 2.8
Kansas	14,571	\$ 2.8
Maryland	12,754	\$ 2.6
Colorado	12,328	\$ 2.3
Oklahoma	12,026	\$ 2.2
Oregon	12,534	\$ 2.2
New Hampshire	10,079	\$ 1.8
Rhode Island	9,467	\$ 1.8
Delaware	5,282	\$ 1.7
Utah	9,164	\$ 1.7
Nebraska	6,367	\$ 1.1
Nevada	5,717	\$ 1.0
Maine	4,952	\$ 0.8
Vermont	3,390	\$ 0.6
South Dakota	2,807	\$ 0.5
Idaho	2,398	\$ 0.4
New Mexico	2,087	\$ 0.3
North Dakota	1,353	\$ 0.3
Montana	847	\$ 0.1
Indiana	72,437	\$ 0.1
Hawaii	628	\$ 0.1
Wyoming	480	\$ 0.1
Alaska	253	\$ 0.0

Source: The Society of the Plastics

Connecticut

As in the economy at large, the Connecticut plastics industry has been flat in 2003 and 2002 at shipments valuing \$3.6B. Although Connecticut's shipments remained constant it dropped to the 22nd highest shipments by state.

Plastic Industry Shipments (\$B)

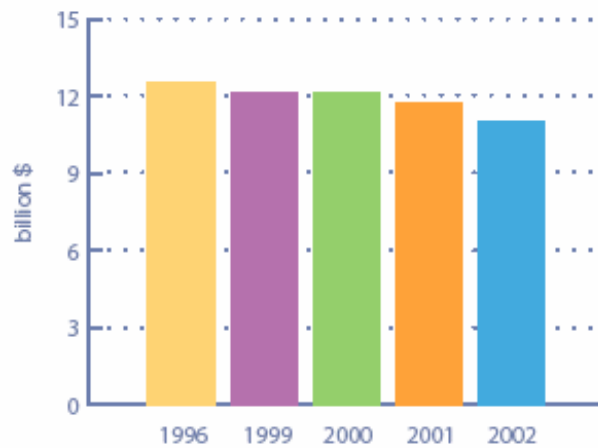


Source: The Society of the Plastics Industry, Inc.(SPI) 2003

New Jersey

The New Jersey plastics industry has continued a steady decline since 1996 when shipments were at around \$12.5B to shipments worth \$11B in 2002. However, New Jersey remains the 8th largest state in plastics shipments overall.

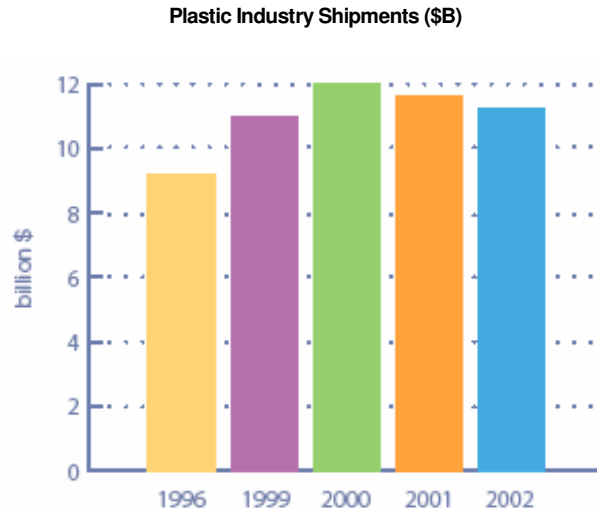
Plastic Industry Shipments (\$B)



Source: The Society of the Plastics Industry, Inc.(SPI) 2003

New York

The New York plastics industry has continued a steady decline since 2000 when shipments were at around \$12B to shipments worth \$10.2B in 2002. In addition, New York has moved from being the 9th largest state by shipments in 2001 to the 10th in 2002.



Source: The Society of the Plastics Industry, Inc.(SPI) 2003

For additional detail on state by state information the The Society of the Plastics Industry makes available, for a fee, the *State-by-State Guide to Resin & Equipment* which highlights consumption, machinery type and processing facilities by state. For more information, see <http://www.plasticsdatasource.org/state.htm>.

Additional Market Statistics

The most recent market statistics, as presented here, are available free at: www.americanplasticscouncil.org/benefits/economic/economic.html, and www.plasticsindustry.org/industry/econstat.htm.

The American Plastics Council publishes an annual resin review with additional market statistics. The review is available for a moderate fee. Information available: www.americanplasticscouncil.org/benefits/economic/pips_exec_summary.html.

The Society of the Plastics Industry also makes available, for a fee, the *Size and Impact of the U.S. Plastics Industry* report which highlights market size, growth and locations. For more information, see <http://www.plasticsdatasource.org/impact.htm>.

In addition, a monthly resin report is produced which contains detailed production and sales information by end use market or “major market” as discussed above. This subscription is available for a fee. Information available: www.americanplasticscouncil.org/benefits/economic/04/MonthlyReport.pdf.

Leading Players

Basic information about leading players is available from a variety of sources. For processors, an online database makes the information readily accessible by type.

Thermoformers

www.plasticsnews.com/subscriber/rankings/thermo.html

Injection Molders

www.plasticsnews.com/subscriber/rankings/inj.html

Pipe, Profile & Tubing Extruders

www.plasticsnews.com/subscriber/rankings/ppt.html

Rotational Molders

www.plasticsnews.com/subscriber/rankings/rotomold.html

Film and Sheet Manufacturers

www.plasticsnews.com/subscriber/rankings/fs.html

Blow Molders

www.plasticsnews.com/subscriber/rankings/blowmold.html

For additional information and lists of companies, Crain Communications publishes a variety of books and databases specific to the plastics industry for a fee. Additional information at: www.plasticsnews.clickdata.com/.

The Society of the Plastics Industry also offers an online database of their members with the ability to search by criteria such as industry segment, location, products and processing methods www.spidirectory.com/.

Information Sources

Associations

Generalist Associations

American Plastics Council

“The American Plastics Council (APC) is a major trade association for the United States plastics industry. APC advocates unlimited opportunities for plastics and promotes their

economic, environmental and societal benefits. To accomplish our mission we demonstrate the benefits of plastic products and the contributions of the plastics industry to the society it serves. We also demonstrate that plastics are an efficient use of natural resources and that plastics and the industry are part of the solution to the public's environmental performance expectations. Our members are among the nation's largest manufacturers of plastics.”

The initial website includes a variety of for public and corporate viewers: www.americanplasticscouncil.org/. The organization manages a variety of specialized sites, including:

- Alliance for the Polyurethanes Industry – www.Polyurethane.org
- Polystyrene Packaging Council – www.Polystyrene.org
- Vinyl Institute – www.VinylInfo.org
- Rigid Plastic Packaging Institute – www.RigidPlasticPackaging.org
- Bulk Directory – www.BulkDirectory.com

The Society of the Plastics Industry

“Founded in 1937, The Society of the Plastics Industry, Inc., is the trade association representing one of the largest manufacturing industries in the United States. SPI's members represent the entire plastics industry supply chain, including processors, machinery and equipment manufacturers and raw materials suppliers. The U.S. plastics industry employs 1.4 million workers and provides more than \$310 billion in annual shipments.”

The website includes substantial amounts of information organized in the following segments: About SPI, About the Industry, Issues and Public Policy, Outreach and Education, Business Development. www.plasticsindustry.org/

Plastics Institute of America

“The Plastics Institute of America is a not-for-profit educational and research organization dedicated to providing service to the plastics industries since 1961. We support, foster and guide plastics education and research at all levels to ensure the continued growth of the industry. Since our founding the Institute has held to this mission with ongoing educational programs and resources for skilled workers, professionals and industry executives.”

The website includes substantial amounts of information organized in the following segments: About, Training, Publications, News, Resources. www.plasticsinstitute.org/

Plastics.com (online community)

“Plastics.com, Inc., serves the needs of the professionals representing all segments of the global plastics industry by providing content and services designed to engage, inform and educate its members. This industry leading community engages plastics professionals in the ultimate peer-to-peer experience, providing actionable information, tools and services to help members get their jobs done.”

The website includes substantial amounts of information organized in the following segments: About, Community, Search, Resources, Marketplace. www.plastics.com

Example Specialist Associations

Rigid Plastic Packaging Institute

“The Rigid Plastic Packaging Institute is a market-driven group of companies searching for ways to do things faster, better and cheaper. Members have invested millions of dollars to advance the manufacturing processes and business practices of the industry. The Rigid Plastic Packaging Institute wants to share this information with your company. The Institute’s special committees are working in the following areas of Technical Research, Packaging Opportunities, Best Practices, and Public Affairs.” www.rigidplasticpackaging.org/

Spray Polyurethane Foam Alliance

“Founded in 1987 originally as the Polyurethane Foam Contractors Division. SPFA is the voice, educational and technical resource for the spray polyurethane foam industry. Our industry trained staff and standing committees comprised of member volunteers provides a wide variety of services for the SPF industry.” www.sprayfoam.org/

Additional Specialist Associations

www.plasticsnews.com/subscriber/rankings/assoc.html

Trade Publications & News

Plastics Distributor & Fabricator Magazine

“Plastics Distributor & Fabricator Magazine’s website has five major sections that correspond to our printed magazine and offer a five-year archive of articles. Additional sections like the Resource Center and keyword searchable 2003 Buyer’s Guide provide comprehensive directories to the leading suppliers of plastic shapes, fabrication machinery (saws, routers, lasers, thermoforming), tooling, accessories and supplies” www.plasticmag.com/default.asp

Plastics News

“PlasticsNews.com is the online complement to Plastics News, a Crain Communications publication. Plastics News, founded in 1989, is a weekly business newspaper serving more than 60,000 readers in a variety of managerial positions.” www.plasticsnews.com

Sales Development

Prospect Lists

In addition to the contacts suggested above, there are a number of commercial services available to assist in the development of a qualified list of sales targets. These databases

include a large amount of information about companies in each industry and generally allow the user to identify specific people with all required contact information.

Three of the leading general purpose databases are available online for various subscription or per-usage fees:

- www.infousa.com/
- www.zapdata.com/
- www.hoovers.com/

Additional databases with listings specific to the plastics industry:

- www.spidirectory.com/
- www.plasticsusa.com/
- www.iapd.org/

It is recommended that you examine sample data for each and determine which of the databases will best meet your needs. These databases are generally accurate but one can expect a certain number of inaccuracies and missing entries.

Standard Industrial Classification (SIC) System

In most cases, sales lists, company lists and industry information are organized using the United States Commerce Department system. The United States government uses a system of codes to classify different segments of the economy called the Standard Industrial Classification (SIC) codes. These codes are useful in examining industry wide employment and production data. The codes are organized hierarchically.

In addition, it is common practice to use SIC codes as a mechanism to identify appropriate customers or suppliers. According to the America Plastics Council, the most commonly identified SICs for the plastics industry are:

- Plastics Materials and Resins (SIC 2821)
- Miscellaneous Plastics Products (SIC 308)
- Molds for Plastics (SIC 3544251)
- Plastics Working Machinery and Equipment Excluding Patterns and Molds (SIC 35593)
- Plastics Wholesale Trade (SIC 5162)

The Society of the Plastics Industry has a complete treatment for SIC information as well as NAICS system at: www.plasticsindustry.org/industry/naics.htm

Marketplaces & Bulletin Boards

Online marketplaces and bulletin boards can serve as an effective means to introduce new products to customers far beyond normal sales channels. Below are listed a number of the prominent websites which attempt to facilitate the interaction of buyers and sellers in the plastics market.

ChemConnect

“ChemConnect was founded in 1995 as a bulletin board site, and has since then established itself as a leader in helping companies optimize their purchasing and sales processes for chemical feedstocks, chemicals, plastics, and related products through the use of e-commerce. The company is committed to innovating and improving transaction processes for buyers and sellers in multiple industries around the world.”
www.chemconnect.com/

PlasticsNet

PlasticsNet is a subsidiary of VerticalNet and therefore be aware that they sell software to facilitate transactions in addition to managing the bulletin board.
www.plasticsnet.com/content/hubs/dir.asp?hub=SellOnline

Polymersite.com

“Our mission is to improve the buying leverage of plastics processors, increase market penetration for our strategic suppliers, and generate new business opportunities for our members.” www.polymersite.com/

Trade Shows

Trade shows are one of the most effective ways to meet potential customers and become introduced to the competition. Below are listed a number of resources to identify the most relevant trade shows for your business.

- www.plasticsnews.com/subscriber/datebook/datebook.html
- www.plastics.com/events.php
- www.plasticsindustry.org/about/calendar.htm

Government Agencies & Business Associations

There are a variety of government agencies and associations that may be useful in developing contacts within the export market. Chambers of commerce are tasked with the policy and relationship needs of its members and may therefore be better able to assist. Economic development agencies are primarily focused on introducing new companies or growing existing companies within the state.

Tri-State Organizations

Connecticut

Connecticut Plastics Council

“Connecticut Plastics Council (CPC) was formed in 1996 based upon recognition of the need for a collective approach in dealing with local Plastics Industry challenges.”
www.itscorporate.com

Connecticut Business & Industry Association

“CBIA is the largest statewide business organization in the country, with 10,000 member companies. We’re the voice of business and industry at the state Capitol. Our highly respected public policy staff works with state legislators and officials to help shape specific laws and to promote a regulatory system that responds to businesses’ needs.”
www.cbja.com

Connecticut Department of Economic and Community Development

“The Department of Economic and Community Development is the state's lead agency for the development and implementation of policies, strategies and programs all of which are designed to enhance Connecticut's communities and business and housing environments.” <http://vfv.ecd.state.ct.us>

New Jersey

New Jersey Chamber of Commerce

“The New Jersey Chamber of Commerce is a business advocacy organization based in Trenton. Created in 1911, the State Chamber staff represents its members on a wide range of business and education issues at the State House and in Washington. The organization also links the state’s local and regional chambers on issues of importance through its grassroots legislative network.” www.njchamber.com/

New Jersey Economic Development Authority

“The New Jersey Economic Development Authority (EDA) is in the business of helping businesses grow in New Jersey. Our mission is to make it easier and cheaper for businesses and not-for-profit agencies to get the capital they need to invest and expand in New Jersey. If you are looking for an affordable way to add new space, buy that new piece of equipment or hire more employees to support your growth, the EDA has over 20 different programs to choose from that may match your needs, whether you’re a business start up or a Fortune 500 corporation.” www.njeda.com

New York

Business Council of New York State

“The Business Council of New York State, Inc., is a statewide business organization, working to build an economic renaissance for New York State and its people. We pursue this mission in two basic ways: By advocating public policies that will improve the business

climate, expand the economy and produce new jobs. And by providing services that help our member companies succeed in their businesses.” www.bcnys.org

Empire State Development

“Our mission is to provide the highest level of assistance and service to businesses in order to encourage economic investment and prosperity in New York State. We work closely with businesses to: identify creative solutions to challenging problems, generate enhanced opportunities for growth, and help them achieve their uniquely important, short- and long-term goals.” www.nylovesbiz.com. Additional website with links to relevant resources for plastics industry in New York state. www.nyplastics.org

New York State Economic Development Council

“The New York State Economic Development Council is the state's principle organization representing economic development professionals. Our 700 members include the leadership of Industrial Development Agencies, Local Development Corporations, commercial and investment banks, underwriters, bond counsels, utilities, chambers of commerce and private corporations.” www.nysedc.org

Laws & Regulations

The Society of the Plastics Industry offers a comprehensive review of the regulatory issues related to the plastics industry. This can be found at:
www.plasticsindustry.org/public/index.htm

Professional Resources

The Society of the Plastics Industry offers a searchable database of professional services offered to the plastics industry. This can be found at:
<http://www.spidirectory.com/search.asp?search=service>

Export Information

For additional information about the process of exporting, requirements, and useful resources, the Canadian government has produced the following websites:

- <http://exportsource.ca/gol/exportsource/interface.nsf/>
- http://strategis.ic.gc.ca/epic/internet/initc-cci.nsf/en/h_ig00010e.html

In addition, The Society of the Plastics Industry offers members support in the export process. More information is available at:

www.plasticsindustry.org/business/international/index.htm

The Canadian Plastics Industry Association provides information through its website at: www.cpia.ca/

Frequently Asked Questions

- **Market Information**
 - Is this the right market for my product? Is this the largest market for my product? Who is the largest consumer of my product? Competitors?
 - As each segment of the market is different, we encourage you to use the resources listed above to learn more about your unique market segment. You will find a variety of publications and individuals who may help you in this regard. See section [Additional Market Statistics](#) for more information.
 - Joint venture opportunities?
 - Identifying joint venture opportunities is a challenging strategic task for any company. We recommend a thorough review of your market and complete understanding of your company's unique competencies before approaching other parties. Thereafter, finding the right match will involve developing personal contacts and meeting others through forums such as trade fairs and associations. For more information on trade shows, please see section [Trade Shows](#) and associations [Associations](#).
 - Other visible Canadian players in the market?
 - The Canadian Plastics Industry may be able to help identify other Canadian producers. www.cpia.ca/
- **Sales development**
 - Do I sell directly or use an agent/third party? How do I locate a rep?
 - Developing sales in a new market involving understanding the dynamics for your unique market segment. Trade associations will be useful in defining these dynamics and in many cases speaking directly with potential customers and agents will be more insightful. A selection of resources can be found in the section [Sales Development](#).
- **Regulations**
 - Do I need to pay US sales tax for my product?
 - Taxation is an important matter in any operation. The best source of advice for your unique situation will come from professional service firms, particularly accountants. More information about identifying appropriate professional service firms can be found in the section [Professional Resources](#).