

SARNIA-LAMBTON

Location for the Data Centre Industry

- *Reliable traditional & renewable power*
- *Available cooling water*
- *Environmental & political stability*

July 2014



Location



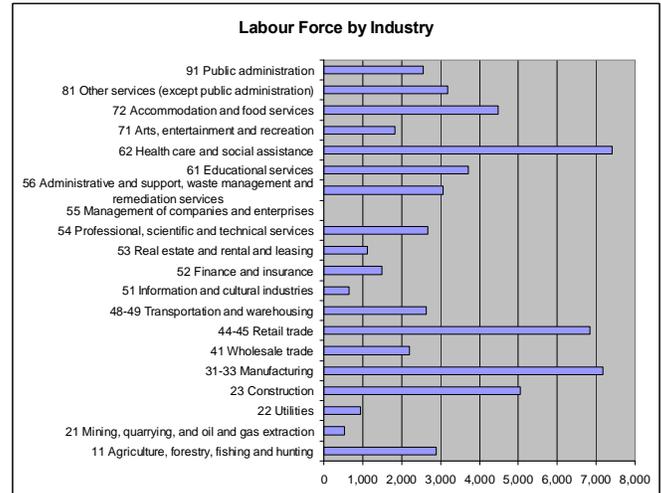
- The City of Sarnia is located in the County of Lambton in southern Ontario, and is the centre of commercial activities for the area. Sarnia-Lambton's location at the border of Ontario and Michigan provides direct access to the USA.
- Lambton County and the City of Sarnia are bisected by Highway 402, which runs eastward from the Michigan-Ontario border and joins Highway 401, which links Montreal and Detroit. To the west, Highway 402 connects with Michigan's Interstate 94/69/75 network via the international Blue Water Bridge.
- Sarnia is home to the Chris Hadfield Airport with direct flights from Sarnia to Toronto's Pearson International Airport. Within approximately one hour drive from Sarnia is the Detroit International Airport (Delta hub with access to all major U.S. cities and many International destinations) as well as London International Airport.

- In addition to road and air access, Sarnia is also located on the St. Lawrence Seaway with freshwater access for both large lake freighters and ocean going vessels. One of the main rail lines that joins Canada with the United States, also runs through the St. Clair Rail Tunnel in Sarnia.

Labour Force

As a result of Sarnia's history in the petrochemical industry there are a number of highly skilled construction and service trades as well as people that are employed in the professional, scientific and technical services in the community. In addition to these areas there are a large number of people employed in the Manufacturing sector which supplies the petrochemical industry.

Sarnia has a highly skilled work force with many industries requiring individuals with engineering and technical backgrounds. Lambton College, located in Sarnia, offers a wide range of programs including Business & Information Technology as well as Process Technology, Health Care and Fire & Public Safety. Other educational institutions are also within close proximity to Sarnia-Lambton including Western University, University of Windsor and Waterloo University.



Source – Statistics Canada, 2011 National Home Owner Survey.

	Total Students	Engineering	Computer Science
Lambton College	2,500		
Western University	27,445	1,888	220
Fanshawe College	15,000		
University of Windsor	16,883	1,419	425
St. Clair College	20,500		
University of Waterloo	27,978	8,190	2,000
Baker College	43,000		
St. Clair College (MI)	4,884		
Michigan State University	47,954	4,263	
Wayne State University	31,505	2,200	

Sarnia is a great place to live and work with 86% of Lambton residents having lived in the community for 5 years or more resulting in a very stable and dedicated workforce.

The last reported unemployment rate from April 2014 is 8.9%.

Infrastructure

Sarnia-Lambton is well equipped to support large scale data centres with access to extremely reliable power as well as data and other supporting infrastructures.

Local Power Infrastructure	MW
TransAlta . Co-generation	506
Greenfield Energy	1,005
St. Clair Energy Centre	577
Enbridge Solar Farm	80
NextEra Solar Farm	40
Sky Generation Wind Farm	16.5
Ravenswood Wind Farm	9.9
Proof Line Wind Farm	6.6

Sarnia-Lambton is known as a power hub for Ontario with both traditional and renewable power as well as co-generation facilities. The power that is produced in Sarnia-Lambton is used across the Province of Ontario and is also exported to the U.S.

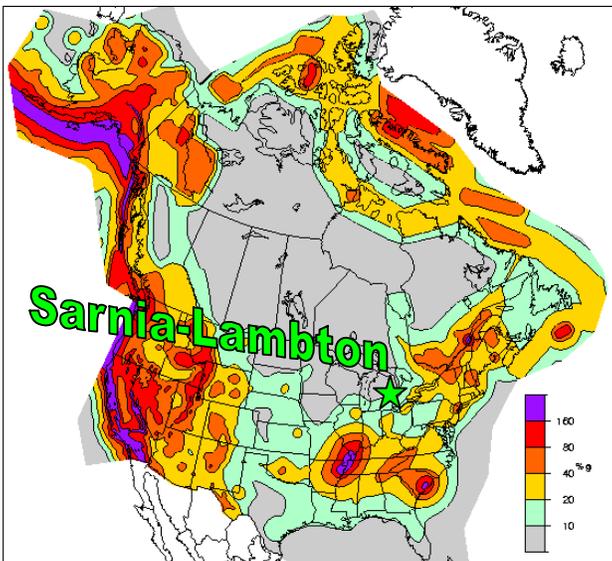
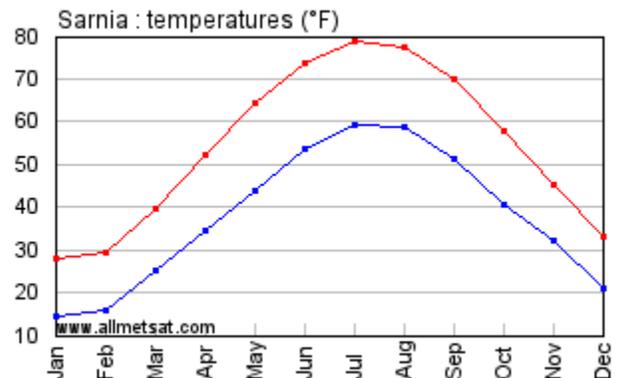
Sarnia-Lambton has many telecommunications options. One of the main fibre corridors that links Canada and the U.S. passes through Sarnia via the St. Clair railway tunnel. Bell Canada and Cogeco are the primary telecommunication providers within Sarnia-Lambton with

ready access to fibre throughout the community. Other innovative telecommunication companies also service the community with Fibre to the Premise, Wireless and Cable / DSL broadband services. With over 85% of the urban and rural areas serviced with broadband as well as some areas that are serviced with Fibre-to-the-Premise, Sarnia-Lambton is well connected.

Beyond access to power and data, being located on Lake Huron and the St. Clair River, Sarnia-Lambton also offers access to cooling water. Local companies can also access large reserves of natural gas as well as an extensive natural gas, petroleum and hydrogen pipeline infrastructure.

Other Location Factors

Located at the southern end of Lake Huron and along the shores of the St. Clair river, Sarnia-Lambton offers many environmental factors that make it an ideal location for a data centre. Our community experiences very moderate summer and winter temperatures as a result of the proximity to Lake Huron. Average highs in July are just under 80 F with lows in the winter only reaching 13 F. According to the Green Grid, Sarnia-Lambton provides 8500 hours of free cooling in addition to the potential option to access cooling water from the St. Clair river.



North American smoothed 2%/50 year PSA 0.2 second hazard map

Sarnia-Lambton is located in a relatively safe environmental zone away from many of the environmental disasters that can plague other parts of Canada and the U.S. including:

- Low seismic hazard (based on 50 year history)
- Low tornado risk in comparison to other nearby regions
- Low flood risk (594 ft. above sea level)
- Low hurricane risk
- No forest fire, volcano or tsunami risk

Sarnia-Lambton is located within Canada and the province of Ontario, an area well known for political and economic stability.

Multiple Real Estate Options

Within Sarnia-Lambton there are multiple well serviced sites to meet the needs of potential data centres. The following are two potential sites that are representative of potential locations in this community:

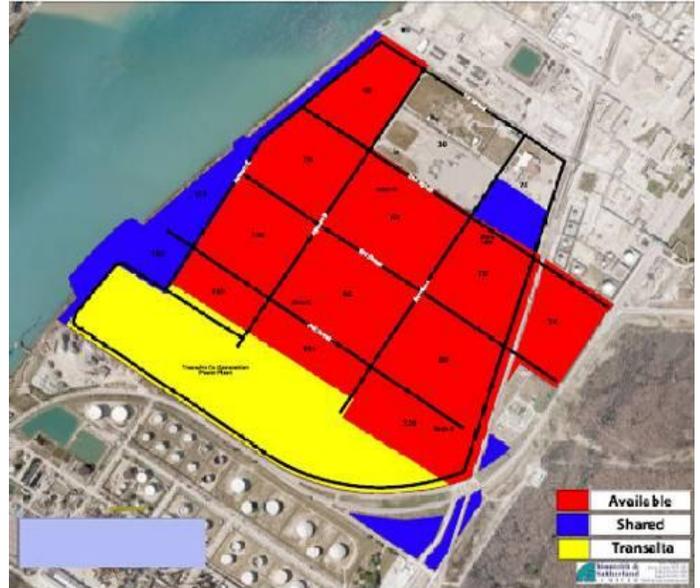
Bluewater Energy Park

The Bluewater Energy Park is a unique site that offers both cooling water as well as special **behind the fence** pricing on power with **20-30% cost savings**. The site is a fully serviced 108.5 hectare (268 acre) site located on the bank of the St. Clair River. At present, the Park has 68.8 hectares (170 acres) available for development and is able to provide cooling water and electrical power from TransAlta's on-site 500 MW cogeneration power plant at favourable prices.

Bluewater Energy Park is owned by TransAlta, Canada's largest publicly traded generator and marketer of electricity and renewable power. TransAlta's Sarnia Regional Cogeneration Plant is the largest cogeneration plant in Canada and is located on the southern perimeter of the park.

The western park boundary is the St. Clair River with a deep water dock facility that provides access to ships on the Great Lakes system and international oceanic cargo through the St. Lawrence Seaway.

The Park also has on-site rail access as well as highway access and is only minutes from the Ontario/Michigan border.



Sarnia Business & Research Park



The Sarnia Business & Research Park, which is owned by the City of Sarnia, is located close to the main commercial area of Sarnia-Lambton. Within minutes of Highway 402 with easy access to the US-Canada border, the site is located directly across from Lambton College which is part of the CANARIE Network (Canada's Advanced Research and Innovation Network). There are 202 acres of available land that is easily divisible to meet specific client needs. The Western Research Park campus and Bioinnovation Centre are also located within this site which is fully serviced including fibre data access.

Features of this site include:

- 202 acres (81.7 hectares) divisible to suite client
- Located next to The Research Park and The Bioinnovation Centre
- Two minutes drive to Provincial Highway 402
- Five minute access to Ontario / Michigan border
- Fibre data and telecommunications access
- Fully serviced . electrical, natural gas, water, sanitary sewers
- Owned by the City of Sarnia

Economic Activity

Major Employers

Petrochemical and refining industries make up Sarnia-Lambton's main industrial sector, followed by agriculture and tourism. The City of Sarnia and St. Clair Township are home to many international companies including Imperial Oil (Exxon), LANXESS, NOVA, Suncor, and Shell.

Sarnia-Lambton is gaining recognition world-wide as a centre for bio-based manufacturing and research and development. The community has been working cohesively for a number of years to create the right environment for bio (organic) based manufacturing. Companies such as BioAmber, Solutions4C02, PlantForm, KMX, Woodland Biofuels Inc. and Methes Energy have chosen Sarnia-Lambton for manufacturing, research and development, or pilot plant facilities; joining the area's growing Sarnia-Lambton Biohybrid Chemistry Cluster.

Recent Investments

- BioAmber expected to complete construction of the world's largest bio-based succinic acid production facility in Sarnia by early 2015.
- Ubiquity solar expected to soon begin construction of its \$10.9M High Performance PV Polysilicon and Ingot Pilot Plant
- Greenfield South Power Corporation and Eastern Power Limited announce building of a 300 MW natural gas powered plant to be located in St. Clair Township
- St. Clair solar farm construction complete in addition to the second largest photovoltaic power station in the world already in operation
- Woodland Biofuels Inc. built a \$10-million Cellulosic Ethanol pilot plant at the Western Research Park
- KmX Corporation ethanol pilot plant completed at the Western Research Park, producing innovative membrane technology.
- NOVA Chemicals is investing \$250 million to allow the use of ethane as a feedstock at its Corunna plant and has relocated their Information Technology Group and Global Accounting Services to the Western Research Park.

Lifestyle

- Sarnia-Lambton is a great place to live, with an appealing mix of big city amenities and small town friendliness.
- Sarnia-Lambton offers very affordable housing
 - Average House \$220,442 (SLREB . May 2014)
 - 2 bedroom rental \$792 (CMHC Spring 2014)
- 40 miles of beautiful freshwater beaches
- 60 recreational parks and conservation areas
- Excellent health care system (with a new state-of-the-art hospital)
- Wide variety of sports teams for all ages and abilities, 20 golf courses, sailing, scuba diving, fishing, wake boarding
- Theatres, RBC Sports and Entertainment complex, new downtown art gallery
- Host to many summer entertainment festivals.
- Sarnia-Lambton is family-friendly and affordable.



The Sarnia-Lambton Economic Partnership

- The staff of the Sarnia-Lambton Economic Partnership are ready and eager to assist with site location services such as accessing any eligible training incentives, assistance with any needed permitting, temporary head office space, and any other location assistance needed.
- The community has a Job Fair Team that is ready to assist with staff recruitment, including screening applications and determining eligibility for any applicable training incentives, testing, and hosting job fairs.

At the Sarnia-Lambton Economic Partnership we are here to work with you in every way we can to make your site selection process as easy as possible.

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