

SECTION 8: ITER CANADA PLAN TO HOST ITER

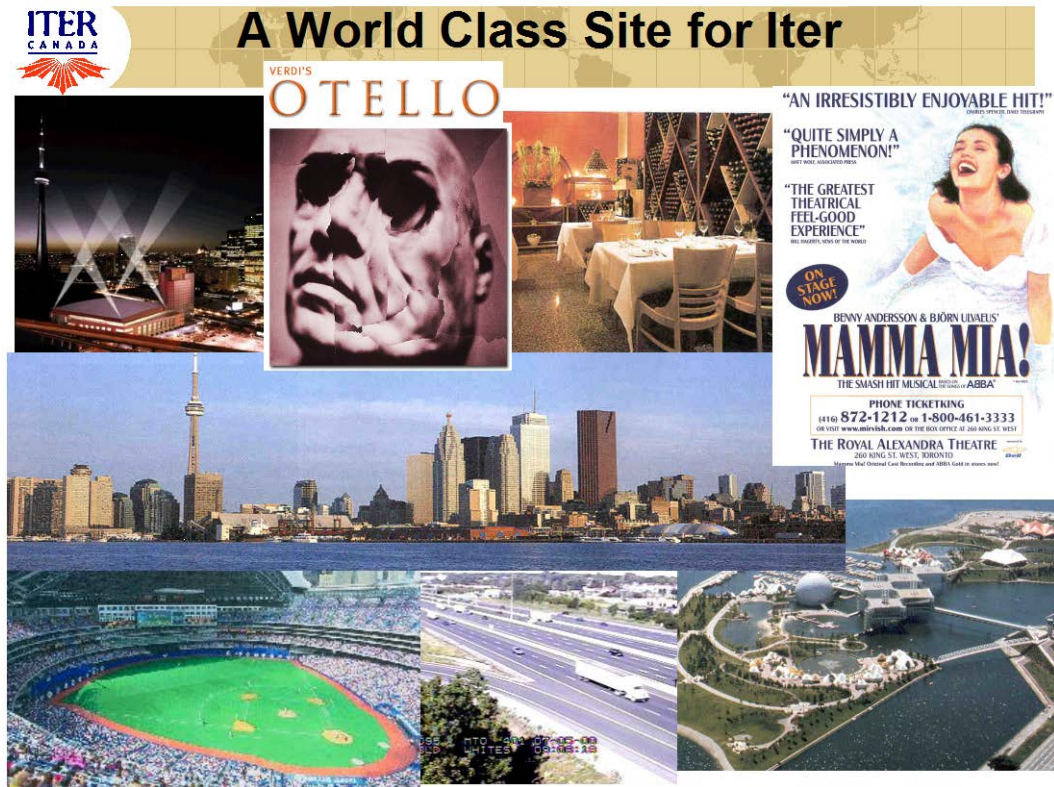
SOCIO-ECONOMIC BENEFITS PACKAGE

8.1 INTRODUCTION

Iter must be located at a site that can offer not only the best technical location for the Iter facility, but a site that also gives Iter the best place for the world's experts to come to advance the quest for fusion energy, surrounded by a community that embraces and welcomes the project and its people with open arms.

The Greater Toronto Area of Ontario, including the Municipality of Clarington, the actual proposed Iter site, and the additional communities to the east in the Northumberland Region, provide such a home for Iter. As shown in Section 2, many of these communities have formally endorsed hosting Iter.

With Iter located here, the world will see the Iter fusion energy research and development centre being established at a world class venue, with unsurpassed education, health, social, cultural, recreational, economic, communications, and transportation amenities for all to enjoy.



This Section of the Plan highlights these benefits to siting Iter in Canada, and demonstrates the commitment of the communities surrounding the Iter site to making the project a success.

Due the wide range of choices and options available to the Iter Parties by locating in Canada, this Section is only intended to give an overview of the socio-economic attributes and benefits. Iter Canada proposes that this should be the subject of an in-depth workshop to customize a program that meets the needs of each of the Iter Parties.

8.2 THE COMMUNITY HOSTING ITER

The figure on the next page shows the location of the Iter site in Canada. The province of Ontario is located in Central Canada and is the country's economic engine. It has a very diverse economy based on manufacturing and services, and has a population of approximately 10 million, one-third of Canada's people.

The Greater Toronto Area (<http://www.greater.toronto.on.ca>) has a population of approximately 4.5 million. Accompanying this Plan is also a copy of a video that visually shows the Greater Toronto Area. The actual city of Toronto is the focal point of the Greater Toronto Area, and the political, financial and cultural capital of Ontario. Toronto and its surrounding communities make up a sophisticated cosmopolitan area stretching across the northern shore of Lake Ontario, west from Burlington, to Clarington in the east. It has many fine restaurants, shopping areas, parks, professional sports teams, and cultural amenities ranging from vibrant live theatre, second only to New York in North America, to opera, the symphony, concerts, lectures, museums, libraries and the internationally acclaimed Toronto International Film Festival.

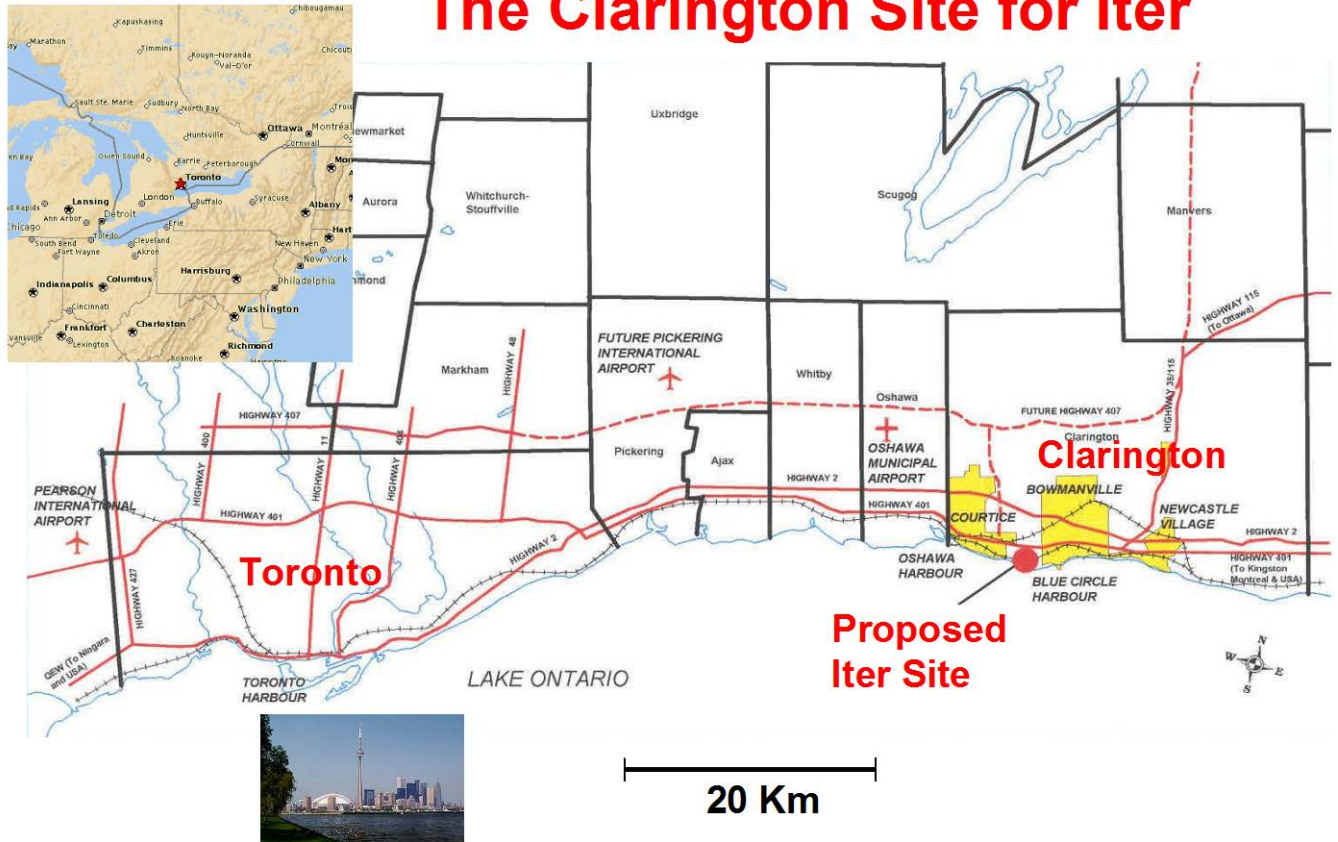
An area of attractive and distinct neighbourhoods, Toronto is also Canada's multicultural capital. Comfortable and proud of its ethnic diversity, Toronto is home to people originating from Europe, Asia and all other parts of the world. On its streets, a mosaic of international languages co-exist along with Canada's two official languages – English and French. As with other parts of Canada, Toronto is one of the world's safest cosmopolitan areas, where people safely and securely can walk our streets day and night.

The actual Iter site is located in the Municipality of Clarington (<http://www.municipality.clarington.on.ca/>), the "Eastern Gateway to the Greater Toronto Area", within the Region of Durham (<http://www.region.durham.on.ca/>). To the east is Northumberland County (<http://www.northumberland.com>). These provide both commercial businesses and residents with unique lifestyle choices. Iter professionals and staff will be able to reside in an unprecedented variety of environments within an hour's drive of the Iter site. Opportunities range from heart of Toronto's city core, through suburban neighbourhoods, small towns, rural hamlets, and near-wilderness cottage living environments - all supported by quick

and easy access to the Greater Toronto Area's urban markets and amenities. This unique balance of urban and rural environment is what makes Clarington stand out as one of the Ontario's finest communities.



The Clarington Site for Iter



This area of Ontario has a well developed socio-economic infrastructure that enhances the quality of life of the people who live here. Affordable housing, quality education and health services, job opportunities and a diverse cultural life are the norm. The actual Clarington site is strategically located less than 50 kilometers (30 miles) from the Toronto core.

Although a one-hour's drive (~80 km) is considered by many Canadians to be a reasonable distance to work, Iter Canada has used a 50-km radius to describe "easy living distance" from the Clarington Iter site. Durham Region, Northumberland, Victoria and Peterborough Counties provide a unique range of living opportunities ranging from rustic, through rural luxury to small-town heritage and high-tech university environments within convenient living distance. Individual community names include Port Hope, Cobourg, Millbrook, Peterborough, Lindsay, Port Perry



and Uxbridge to the east and north; Oshawa, Whitby, Ajax, Pickering to the west (closer to Toronto).

Clarington is the fastest growing community on the east side of Toronto with a current population of 71,490 and a projected population of 102,340 by the year 2010 and 130,700 by 2021. The Region of Durham, of which Clarington is one of the eight member municipalities, with a population of approximately 500,000, is expected to reach 690,000 by 2010 and 786,000 by 2021.

Sustained growth gives these communities a vibrancy and excitement that fosters a warm welcome to everyone who moves and works there.

8.3 HOST COMMUNITY INITIATIVES

While Canada is perhaps one of the easiest countries in the world for a family to move to and become well established. Iter Canada and the host communities will make every effort to ensure this transition is trouble free and enjoyable.

The initiatives outlined here are intended to help the Iter international seconded professionals and their families and visiting scientists, make the transition to the Toronto area. A special "**host reception team**" will be established, to ensure all the necessary information is available and assistance is provided to make the transition to a new community easier and less stressful.

8.3.1. **Detailed Information Packages:** Prior to arriving in Toronto, all participants will be provided with a detailed information package that will include helpful information about the community, maps of the community and surrounding areas as well as general information about climate/weather conditions, healthcare & education programs, area services, employment opportunities (spouses), and recreation/leisure opportunities. Packages will also contain municipal publications from municipalities within easy living distance of Clarington: Toronto, Durham Region (including Clarington), Lindsay, Peterborough, Cobourg and Port Hope. Information regarding available housing and special interest organizations will also be included.

8.3.2 **Initial Housing Requirements:** Prior to initial arrival, the Host Reception team will make appropriate temporary hotel or other accommodation arrangements, such that on arrival the family can set up a "home base", while making all the decisions on their longer term accommodations.

8.3.3. **Meet and Greet - Orientation:** On arrival, or as early as possible following their arrival, a special orientation program bring members of the host community to meet and greet the members and their families who will be working at Iter. Translators will be available to ensure that questions can be asked and answered without fear of misunderstanding. These initial orientation sessions will enable the host community reception team to make

sure that the requirements and special needs of all the visiting families are considered and attended to.

Special care will be taken to ensure all the basic and necessary personal and family matters are attended to, such as:

- Health care registration
- Housing areas and choices
- Schooling choices and registration
- Drivers license processes
- Any required government registrations
- House and car insurance
- Banking services
- Utilities (eg. telephone, electricity, cable television, mail services)
- Shopping areas and procedures

8.3.4. **Familiarization Tours:** The Municipality of Clarington has an established track record in providing new residents with an in-depth orientation to their new community. A popular activity is the "familiarization tour" of the community. These tours are intended to give the new visitor or resident a sense of the community that they are joining. Through partnerships with local business and tourism operators, Clarington has planned and operated tours, which introduce the visitor to area attractions, business/shopping districts and residential communities. Touring programs have been used to introduce participants of the Canada/World Youth Exchange (students from Russia and Ukraine) as well as for the principals and students of the Great Lakes College of Toronto (students mainly from China).

8.3.5. **Breaking Down Language Barriers:** Working with representatives of the area School District Boards and the Ontario Institute of Technology , special training programs, such as "English as a Second Language", will be made available to any person interested in participating. Wherever possible, courses will be held within the Clarington area to make access more convenient.

The balance of this Section describes in detail the facilities and services available to seconded Iter professionals and their families.

8.4 HOUSING

8.4.1. **Housing Availability:** The housing market within easy driving distance of Clarington and the Toronto area is characterized by variety, availability and affordability for home ownership and rental accommodation. When choosing a house in the Greater Toronto Area, a number of options are available for varying lifestyles. In downtown Toronto, condominiums and apartments predominate. Suburban single-family and townhouse

developments can be found in the cities of Ajax/Pickering, Whitby, Oshawa, Bowmanville, Courtice and Newcastle. Farther north, the City of Peterborough offers similar living conditions in a small city with a liberal arts university. Small towns such as Port Perry, Uxbridge, Port Hope, Cobourg, Millbrook etc. offer a wide variety of single-family housing types, including well-preserved heritage properties up to 200 years of age. Rural living opportunities range from hamlets to farms in the rolling Northumberland Hills, to rustic, year-round cottages in the Rice Lake and Kawartha Lakes vacation areas.

Red brick, white stucco, frame and board and greystone homes dating from the middle 1800s are found in the historic downtown cores of each urban area. The variety of architectural styles, located side by side, provide for a dynamic streetscape while reflecting the area's European heritage as well as local vernacular expressions of construction and design. Sales of older housing stock have been steadily increasing in the last decade, with a large demand for century homes (100 years old or older) and homes designated as historic sites. Average resale figures are on par with new home sales.

Newer developments within easy driving distance of the Clarington site offer modern homes (often with double garages) in neighbourhoods with meandering tree-lined roads and parks and playgrounds situated within walking distance. New home construction has seen a 10 year increase, stabilizing over the last 3 years.

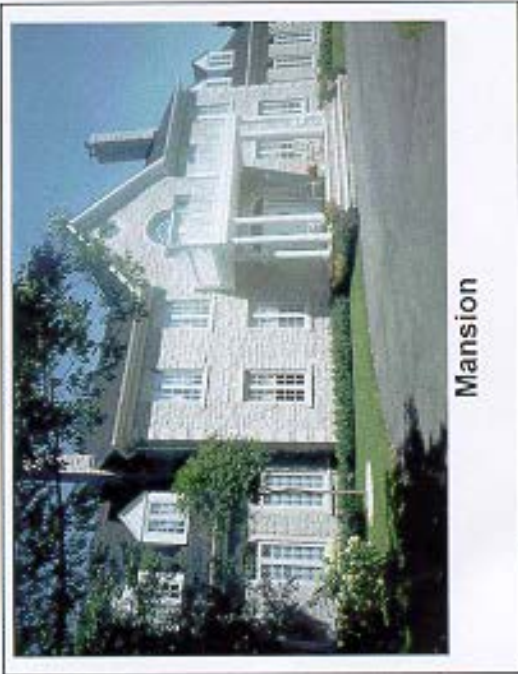
The pictures on the next page show typical housing in the area, and the Table 8.1 on the following page shows the magnitude of housing stock in Clarington, Durham and the Greater Toronto Area categorized by residential type and the percentage of the total stock within each category.

Many hamlets near Clarington, are clusters of residential settlements that provide a rural village setting. These hamlets are characteristic of country living in Durham Region, with an easy commute to the major centers of Oshawa, Toronto, Markham, Newmarket and Peterborough.

Table 8.1: Housing Stock in the Iter Area

Dwelling Units (August 2000)			
Type	Clarington	Durham Region	Greater Toronto Area
Single-detached house	79.9%	68.1%	46.8%
Semi-detached house	4.7%	6.4%	7.8%
Row house	7.5%	8.4%	8.1%
Apartments	7.8%	17.1%	37.4%
Total	22,572	167,105	1,914,311

Source: Compiled from Canada Census 1996 and Canada Mortgage and Housing Corporation Housing Statistics Data – 2000.



HOUSING SAMPLES



8.4.2. **Housing Price and Rental Rates:** Home ownership is popular in Canada because of its affordability. Real estate values rise as they approach the core of Toronto, yet prices continue to be affordable for many people because of the availability of developable residential land throughout Durham Region, Northumberland County and particularly within Clarington. Table 8.2 below shows both selling price and rental rates for various housing forms. Annual rental rates are generally 5-10% of the purchase price of homes.

Table 8.2: Housing Prices

AVERAGE HOUSING PRICES AND MONTHLY RENTAL RATES AS OF JANUARY 2000 (IN THOUSAND CA\$)										
Housing Type	Toronto (Scarborough - West Hill)		Oshawa		Pickering		Courtice (Clarington)		Peterborough	
	Price	Rental Rates	Price	Rental Rates	Price	Rental Rates	Price	Rental Rates	Price	Rental Rates
Bungalow	\$220	\$1.2	\$155	\$1.2	\$195	\$1.3	\$192	no rental data	\$127	no rental data
Standard Two-Storey	\$240	\$1.2	\$150	\$1.3	\$190	\$1.2	\$198		\$130	
Executive Detached Two-Storey	\$250	\$1.25	\$225	\$2.0	\$255	\$1.6	\$261		\$175	
Senior Executive	\$380	\$1.5	\$350	\$3.5	\$325	\$2.5	\$361		\$270	
Standard Condominium Apartment	\$111	\$1.05	\$105	\$1.0	\$135	\$1.1			\$110	
Luxury Condominium Apartment	\$230	\$1.3	\$250	\$2.0	\$180	\$1.2			\$200	

Source: Royal LePage Neighbourhood Pricing Trends, <http://www.royalepae.ca/Properties/nptc>.
The data for Courtice is July 1999, the most recent available, increase by the average of the increase in the other 4 communities)

Table 8.3 below shows rental and vacancy rates for apartments of various sizes.

Table 8.3: Apartment Rental Rates

Average Monthly Rents in Durham Region & Toronto (October, 1999)						
Type	Year	Clarington	Oshawa	Whitby	Ajax, Pickering - Uxbridge	Toronto
2 - bedroom apartment	Oct 1999	\$ 728	\$ 737	\$ 781	\$ 809	\$ 924
2 - bedroom vacancy rate	Oct 1999	1.3%	1.9%	0.5%	0.8%	0.8%
3 - bedroom apartment	Oct 1999	\$ 930	\$ 827	\$ 883	\$ 952	\$ 1,088

3 - bedroom vacancy rate	Oct 1999	0.0%	2.5%	0.0%	0.3%	1.5%
Total	Oct 1999	1.0%	2.1%	0.7%	0.6%	0.9%

Source: Canada Mortgage Housing Corporation

8.4.3. **Property Tax:** Effective January 1st, 1998, properties are assessed in the Province of Ontario based on its "current value" which is defined as the amount of money the building and land would realize if sold at arms length by a willing seller to a willing buyer. This becomes the basis for calculating the taxes on each property.

The following Table 8.4 illustrates the estimated residential property tax rates for selected municipalities in the Greater Toronto Area.

Table 8.4: Residential Tax Rates

Estimated Residential Property Tax Rates (2000)	
Municipality	Residential Tax Rate
Toronto	1.21%
Ajax	1.64%
Brock	1.85%
Clarington *	1.53%
Oshawa	1.76%
Pickering	1.51%
Port Perry	1.57%
Uxbridge	1.50%
Whitby	1.63%
Cobourg	1.84%
Port Hope	1.82%
Peterborough	1.69%
Lindsay	1.93%

* Clarington tax rates do not include Regional and Local Waste Charges which are collected on a per household rather than assessment basis.

In effect, for a home that has been assessed at \$250,000, taxes would be approximately \$3,825 in Clarington, \$4,000 in Oshawa, etc.

8.4.4. Utilities:

Telephone: Residential telephone service can be provided by any number of telephone companies, due to recent deregulation of local and long-distance telephone service by the "Canada Radio and Telecommunications Commission" (CRTC). However, Bell Canada has historically been the major supplier of residential telephone service within the Greater Toronto Area. For comparison purposes, Bell Canada's basic installation fee for a

new home would be \$55 for connection of a new telephone line to a new dwelling, \$65 for activation of the new line, and on average between \$20 to \$25 per month for basic residential local service. For homes with existing telephone lines, the connection fee is \$55 and averages between \$20 to \$25 per month for the basic residential local service. In Canada, it should be noted that the monthly basic connection fee includes unlimited local calling time. Long distance rates are based on usage, but are very inexpensive in Canada.

Table 8.5: Local and Long Distance Telephone Rates

Estimated Bell Canada Long Distance Rates (2000)		
<i>Country (any time)</i>	<i>Residential Rate (\$/minute)</i>	<i>Calling Card Rate (\$/minute)</i>
Japan	\$0.64	\$ 0.79
Germany	\$ 0.40	\$ 0.55
France	\$ 0.35	\$ 0.50
Russia	\$ 2.15	Same as res.
-6:00 pm to 10:00 am	\$ 2.87	+ \$1.75
- all other times		surcharge
United Kingdom	\$ 0.22	\$ 0.37
United States	\$ 0.22	\$ 0.22

Natural Gas: Natural gas is the predominant heating fuel in urban areas; oil and wood are common in rural properties. Propane is not frequently used.

Typically, a single natural gas supplier is contracted by the municipality to install the natural gas pipeline and meter into an urban residence. In Clarington, this is Enbridge Consumers Gas, in more easterly communities, Union Gas is the selected supplier.

Electricity: The Province of Ontario has recently reorganized Ontario Hydro, which was the primary producer and supplier of electricity in Ontario. Hydro One is now the premiere supplier of hydro-electricity in Ontario. However, there are many distributors depending on the location, such as Veridian Corporation, Whitby Hydro, etc. Residential users enjoy very low electricity rates, compared with other countries averaging Cdn \$1500-1700 per year.

Table 8.6: Residential Electricity

<i>Estimated Hydro-Electricity Rates (1999)</i>		
<i>Location</i>	<i>Rate (Cdn \$ / kWh)</i>	<i>Estimated Annual Bill (20,000 kWh / Year)</i>
Ajax	\$ 0.770 to \$ 0.853	\$1,539.40 to \$1,706.00
Clarington	\$ 0.0793	\$ 1,586.00
Cobourg	\$ 0.0793	\$ 1,586.00
Oshawa	\$ 0.0812	\$ 1,624.20
Pickering	\$ 0.0770	\$ 1,539.70
Port Hope	\$ 0.0764	\$ 1,527.10
Scugog	\$ 0.0775	\$ 1,550.80
Toronto Hydro	\$ 0.0881	\$ 1,762.00
Uxbridge	\$ 0.0785	\$ 1,569.50
Whitby	\$ 0.0811	\$ 1,621.50

Television Service: In Canada, television service is available by antenna, satellite, microwave and cable, depending on your location. All options may not be available in all locations, so each resident needs to assess availability and need individually. In urban areas, the most popular choice is cable television (which, in some areas, can also be used to obtain high-speed Internet access), provided by Rogers Cable, Shaw Cable or Cogeco, depending on location. All three companies can connect a new cable service or re-activate an existing service to a residence within their service area. Basic service (unlimited time, limited choices) costs roughly \$20/month.

8.5 EDUCATION OPPORTUNITIES

Canada is well known around the world for its multi-culturalism. This rich cultural diversity is particularly prominent in Southern Ontario and is reflected in its education system where students can pursue their choice of education in one of the public systems, or at a private school; take English as a second language training (ESL Program), or enrol in the International Baccalaureate Program (IBO).

In addition, the Greater Toronto Area is also home to a variety of schools that offer culture-specific weekend programs to supplement the Canadian curriculum taught in the primary and secondary schools. These schools are available for many cultures including Japanese, German and French. An example is the Japanese Shokokai Saturday School in Toronto.

The special educational needs for the children of the families of the Iter project seconded professionals that will be coming to Canada can be met with Iter sited in Clarington. This Section will describe the public and private schools in the region in general, but Iter Canada proposes that during the negotiations phase, Iter Canada will develop, in conjunction with the Iter Parties, the best process and systems to meet all the anticipated educational needs.

The Canadian education system is based on publicly funded elementary and secondary schools administered by district school boards, which adapt provincial educational policies to local situations. These district boards ensure the provision of adequate teaching and support staff and appropriate facilities. Elected members of the board, called trustees, represent the local community, providing a link between electors and the education system. Class sizes within the public school range from 21 to 24 students and the school terms extend from September to June.

There are two parallel public school systems – one is non-denominational and referred to as the “Public” system and the other is for Catholics and referred to as the “Separate” system. The separate system is designed to reinforce the teaching of the Catholic Church while adopting the same educational standards as the public system. Both systems provide full-time French immersion programs. The public systems are excellent and the vast majority of Canadian children attend these schools.

8.5.1. Elementary Schools: In Clarington, there are 19 public elementary schools and five separate (Catholics) elementary schools offering primary school program from junior kindergarten to Grade 8.

Primary schools are also located in every surrounding neighbourhood and school bus transportation is available to students living beyond 1.6 km. from the school.

Within the Toronto core there are 451 public elementary schools and 186 separate elementary schools.

8.5.2. Secondary Schools: In Clarington, there are three public secondary schools and one separate secondary school. These schools offer curriculum from Grade 9 to Grade 12 including Ontario Academic Credits (OAC) preparing the students for admission to universities. Durham Region has 18 public secondary schools and six separate secondary schools, while Toronto has 102 public secondary schools and 36 separate secondary schools. This picture is repeated in Northumberland County, where secondary schools are located in the towns of Port Hope and Cobourg.

8.5.3 Private Schools: There are several prestigious private schools within the communities of Clarington and Durham Region, as well as in nearby communities of Toronto, Peterborough, and Port Hope. These private schools offer a variety of primary and secondary school programs. Some schools offer the International Baccalaureate (IB) program for advanced placement in universities worldwide.

An excellent web site (www.ourkids.net) provides a wealth of information about private schools across Canada and particularly in Ontario.

Information includes details on the grades taught, enrolment, type of school (co-ed, boys, girls), number of boarding/day students, student/teacher ratio, average class size, cost, school philosophy and contact details.

The International Baccalaureate

Founded in 1960, the International Baccalaureate Organization (IBO) is a non-profit educational foundation based in Switzerland that aims to establish a common curriculum and university entry credential for geographically mobile students. The IB program hopes to create a shared academic experience that emphasizes critical thinking and exposure to a variety of viewpoints that foster tolerance and inter-cultural understanding among young people.

As a membership organization, the IBO schools provide curriculum and assessment development, teacher training and information seminars, electronic networking and other educational services to its 1000 participating schools in 100 countries. The IBO offers the Diploma Programme for students in their final two years of secondary education, the Middle Years Programme for students ages 11-16 and the Primary Years Programme for students aged three to 12 years.

The Diploma Programme is a rigorous pre-university course of studies, leading to standard examinations that meet the needs of highly motivated secondary school students between the ages of 16 and 19 years. Designed as a comprehensive two-year curriculum that allows graduates to fulfil requirements of various national education systems, the diploma model is available in English, French and Spanish.

IB graduates gain admission to selective colleges and universities throughout the world. Students with strong IB examination results may also receive advanced standing or course credit, depending on the policy of the institution they are attending.

There are currently 4 schools in Toronto offering the IBO program. In addition, several private schools have expressed interest in offering IBO Programs to meet the need of ITER scientists and children.

Private schools within 100 km of the Iter site currently offering the International Baccalaureate Program:

- Upper Canada College
- Elmwood School
- Sunnybrook School
- St. Michael's College
- Toronto French School
- Pickering College

- Bishop Strachan School
- Le College Francais
- Vaughan Road Academy
- Trinity College School
- Lakefield

The Great Lakes College of Toronto: Of the private schools that expressed interest in offering the IBO Program, it is worthwhile to note that the Great Lake College of Toronto has advanced its commitment and is currently in discussion with officials from the IBO to bring such a program to its Clarington campus.

The Great Lakes College of Toronto currently offers secondary school curriculum to foreign students coming from China, Japan, Korea and other countries. To prepare these foreign students, the College recently opened a new campus in Clarington, to provide the teaching of English as a second language (ESL) program.

Both the ESL and IBO Program offered by the Great Lakes College located in close proximity to the Iter site will be a tremendous asset to those scientists who choose to live near the Iter facility and have available world-class education opportunities to their children.

8.5.4. **Universities:** The Greater Toronto Area and the areas to the east and north of Clarington boast some of the world's best universities.

Toronto is home to the University of Toronto, York University, Ryerson Polytechnic University and the Ontario College of Art and Design. Trent University is located in Peterborough and has a strong archaeology department as well as a program in biological environmental protection.

Both the University of Toronto and York University are renowned for their physics departments, as are Queen's University in Kingston (190 km east), McMaster University in Hamilton (140 km west), the University of Guelph in Guelph (150 km west) and the University of Waterloo and Wilfrid Laurier University in Waterloo (177 km west).

The University of Toronto currently uses the Chalk River reactor facility (near Ottawa) for laboratory purposes, while faculty from the physics departments at Queen's University and the University of Guelph participate in the Sudbury Neutrino Observatory (SNO), located 400 km north of Toronto. Clarington's central location would permit wide participation for any facility located here.

Also, announced in the May 9, 2001 Province of Ontario budget speech was the creation of the Ontario Institute of Technology (O.I.T.). This innovative institution - Canada's newest university - will be located at the Oshawa campus of Durham College. Classes will begin in September 2003 and one of O.I.T.'s eight startup schools will be the School of Nuclear Energy and Safety. Not only will O.I.T. build on the tremendous success of Durham College, it will open up new avenues for higher education and world-class research. Durham College and O.I.T. are extremely excited about the prospect of Canada hosting Iter. Moreover, the Iter project, O.I.T. and Durham College all stand to gain substantially from one another in terms of shared knowledge, applied research, human resources and enhanced reputation.

- 8.5.5 **Colleges:** Nearby community colleges offer 1-year, 2-year and 3-year diploma/certificate programs in training and technology. Many of these colleges offer joint programs with the major universities in Ontario.

Located within Durham Region and closest to the Iter site, Durham College offers post secondary school education in a full array of certificate, diploma, and degree programming. The College is Canada's largest provider of corporate training to external clients, and will custom design training programs to meet the need of industries and research facilities.

The colleges of Seneca, Humber, Centennial and George Brown are located in Toronto, with many satellite campuses. Sheridan College in Brampton, northwest of Toronto, is famous for its computer animation program.

To the east, Sir Sanford Fleming College in Lindsay has strong programs in nursing, forestry and robotics. Loyalist College in Belleville offers excellent instruction in radio broadcasting.

8.6 HEALTH SERVICES

Our health care system is undeniably one of the best in the world, providing open and equal access to all residents. In Ontario, the majority of health services are provided through the public, government funded system administered through the Ontario Health Insurance Plan (O.H.I.P.). The Ontario Ministry of Health operates O.H.I.P. as well as determines policy and regulations for most areas of health care.

This health plan and its component services are financed primarily through Federal and Provincial income tax and corporate health insurance premiums. Full coverage is available at no charge to all Canadian residents and landed immigrants. Extensive and specialized medical services are available in both Durham Region and the Greater Toronto Area. As described in Section 4.7, these services will be available to the Iter professionals and their families.

8.6.1. **The Greater Toronto Area Boasts:**

- 35 hospitals, \$4 billion spending and 100,000 employees
- 10,000 doctors and dentists, \$3 billion spending
- nursing homes and long term care: \$1 billion spending
- home care and community health: \$1 billion spending
- drugs & pharmacy \$1 billion

8.6.2. **Major Medical Facilities:** The Greater Toronto Area has a number of world renowned medical centres, including:

- Hospital for Sick Children - Children's health
- Toronto General - Kidney & Heart Disease, Transplantation, Eating Disorders
- Sunnybrook & Women's College Health Sciences Centre - Ageing, Orthopaedic, Arthritic, Cancer, Trauma & Women's health issues.
- St. Michael's - Teaching, Brain injury & Heart disease
- Mount Sinai - Neonatal, Surgical oncology & Musculoskeletal disease.

8.6.3 **Local Medical Care Facilities:**

<u>Health Centres & Hospitals</u>	<u>Total Beds</u>	<u>Outpatient & Emergency Facilities</u>
Ajax Pickering Health Centre	106	Yes
Bowmanville Lakeridge Health Centre	98	Yes
North Durham Health Services	72	Yes
Oshawa Lakeridge Health Centre	481	Yes
Whitby Lakeridge Health Centre	68	Yes
Whitby Mental Health Centre	297	-
Northumberland Health Care Coop	101	Yes
Peterborough Regional Health Centre	360	Yes
Ross Memorial Hospital	159	Yes

Emergency / Urgent Care Facilities: Urgent Care Facilities in addition to being available at Hospitals are also available at the Oshawa Clinic, The Glazier Medical Centre (Oshawa), Whitby Family Health Centre, Port Hope Medical Centre, Lindsay Hospital Medical Centre, and in Bowmanville at the Lakeridge Health Centre.

8.6.4. **Other Health Services Summary:** In addition to hospital, health centre and urgent care facilities, the following are available within convenient living distance of the Clarington site:

- Walk-in clinics
- Crisis Distress Centres
- Shelter for battered women and children

- Sexual Assault Centre
- General Health Information Centre
- Drug Help Line
- Special Services for Seniors
- Children Rehabilitation and Treatment Centre
- Acute and Chronic Home Care Services
- School Health Support Services Program
- Nursing services, both private and non-profit
- Naturopathic and Homeopathic physicians
- Acupuncture

8.6.5. **Doctors and Dentists:** The College of Physicians and Surgeons is the licensing body in Ontario, which lists 554 licensed physicians practising in Durham Region and 6,742 in Toronto. Specialists represent approximately 42% of the total number of licensed physicians in Durham, whereas they represent 60% of the total in Toronto.

The Ontario Medical Association (OMA) lists approximately 520 members in Durham Region and approximately 9,358 within or near the City of Toronto.

The Royal College of Dental Surgeons is the governing body for Dental Surgeons in Ontario and list over 7,000 licensed and practising Dentists in Ontario. There are 224 licensed and practising Dentists in Durham Region and 2339 in Toronto.

8.7 EMPLOYMENT OPPORTUNITIES FOR SPOUSES

8.7.1 **Employment Centre:** After an initial orientation process, the Municipality of Clarington through its partnerships with the Clarington Business community, the Region of Durham, the Durham Business community and Human Resources Development Canada (HRDC), would create a specific "*Employment Centre*" to identify employment opportunities for the spouses of the Iter seconded personnel.

The *Employment Centre* will establish a process through which interested participants would be interviewed and matched with potential employers in the area of their choice. Part of this process would be to identify the specific skill sets of participants in order to match them with identified requirements of potential employers.

A letter from the senior representative of Human Resources Development Canada (Attachment 8-B) is attached as an indication of their support and willingness to participate in the special "*Employment Centre*".

The statistics in the next section give Iter Canada confidence that opportunities are very good for spousal employment.

- 8.7.2. **The Job Market and the Area's economic strength:** The 1990s witnessed very healthy growth in the business services sectors, the health and social services sector as well as the community and personal services sector. Sectors experiencing slow growth or decline: primary industries, construction and public administration.

Industry sector growth: This growth is supported by the higher than provincial and national average concentration of highly educated employees. This is especially true of trained employees in the sector of engineering and applied sciences where the Greater Toronto Area has 19% more qualified people than the provincial average and a whopping 37% more than the Canadian average. In the mathematical and physical sciences, the same trend is clear, with 19% more qualified people than the Ontario average and 35% more than at the national level (Source: Census 1996, StatsCan.)

Job Growth: Overall employment increased 17.3% during the 1994-99 period. The most rapid growth experienced was in "Professional, Scientific and Technical services" - 47.1% growth 1994-99 and 81.4% during 1987-99. The "Management of companies, Administrative and other support services" grew by an astounding 100.1% over the 1987-99 period and 46.1% over the 1994-99 period. Overall the tertiary sector or "services-producing" sector grew by a very healthy 24.3% from 1987-99 and by 15.0 from 1994-99.

The primary and secondary sectors or "goods-producing" sector that includes manufacturing, utilities and construction declined from 1987-94 but then bounded back to increase 24.9% from 1994-99 to finish with just a slight decline of 2.5% over the 1987-99 period. Utilities increased 44.6% in the 1987-90 period to then decline over the 1990-94 period. This sector finished the 1987-99 period with a small (1.7%) increase.

The economic base north and east of the Clarington site is also well diversified, stable and interesting: agriculture and tourism are significant sectors, however advanced manufacturing in automotive parts, plastics and materials management clusters are common in each of the urban areas. Peterborough has recently become a world centre for Call Centres.

GTA's strength in new sectors of the economy: Newer sectors of the economy are strong in the Greater Toronto Area. The Biomedical and Biotechnology sectors experienced rapid growth during the '90s and the Greater Toronto Area represents arguably North America's premier location for this industry.

The software industry is also strong, with significant job growth in the late 1990s experienced throughout the GTA.

Full-time/Part-time: Many observers comment that the new economy should result in more part-time jobs or "McJobs" and fewer full-time jobs. While this was true during 1991-96, the recent recovery and growth cycle has seen the number of part-time jobs drop to 15.1% of all employment for 1999, the lowest since 1990. Monthly figures show a drop in August 1999 to 14.3%, one of the lowest since the September 1990.

Unemployment: The Unemployment rate recovered in 1999 to levels more in line with the pre-recession (1991-94) levels of the 1980s. December's 1999 unemployment rate of 5.0% for the entire Greater Toronto Area is the lowest since June of 1990. The rate has stayed at 5.0% according to the July 2000 (seasonally adjusted) figures from Statistics Canada. The Greater Toronto Area's strength is as one of Canada's leaders in job creation.

8.8 CULTURAL BENEFITS

8.8.1 **Ethnic Diversity:** The ethnic diversity of Toronto is renowned and celebrated through its citizens, its neighbourhoods and its multicultural events. English is the predominant mother tongue, however almost 35% of residents claim as their mother tongue languages other than English or French. The top five other languages spoken in the GTA and Durham are:

Table 8.7: Ethnic Diversity Statistics

Greater Toronto Area		Durham	
Chinese	18.5%	Ukrainian	18.5%
Italian	13.3%	German	13.8%
Portuguese	6.9%	Italian	10.4%
Polish	5.4%	Dutch	10.4%
Spanish	4.7%	Polish	6.4%

With numbers like these, it's no wonder the United Nations has called Toronto the most multicultural city in the world!

Cultural events that celebrate the area's ethnic flavour include:

- International Caravan
- Caribana
- CHIN International Picnic
- Dragon Boat Races

Each ethnic neighbourhood also holds local festivals and street parties that create a vibrant, healthy and socially dynamic environment.

There are a number of Japanese cultural organizations in Toronto which host events and provide various services to recent immigrants, long-time residents and non-Japanese with an interest in Japanese Culture and history. Japanese organizations include:

- Canada-Japan Society of Toronto (CJST)
- The Japan Foundation
- Access Japan 2000 (via Consulate General of Japan)

8.8.2. **Sports and Leisure Activities:** Ontarians enjoy outdoor and indoor events in almost equal measure. Spending time outside and enjoying nature has become an especially popular pastime. Many of the area's significant natural features provide opportunities for active and passive recreation. One can:

- visit the Scarborough Bluffs
- walk the Rouge Valley
- hike the Oak Ridges Moraine
- paddle the Ganaraska River
- cycle the Lake Ontario waterfront
- view the Petroglyphs
- explore the Warsaw Caves
- ski downhill and cross-country in the Ganaraska Forest
- sail from one of the many recreational harbours
- take a houseboat tour up the Trent-Severn waterway
- many provincial and national parks

There are many natural significant areas sustaining flora and fauna, maintaining historic water patterns, and presenting spectacular views of the region. Conservation authorities, in conjunction with area municipalities, the provincial government and the federal government have developed trails for hiking and mountain biking and provide parks for fishing, camping, birding and picnicking. In the winter, the region has groomed snowmobile trails, downhill and cross-country ski resorts and ice-skating facilities.

Indoor recreational activities for adults and children are available at the multitude of local community centres. A growing sport is rock and wall climbing, with a number of facilities throughout the Toronto area that offer instruction and practice space.

For sports fans, Toronto is home to six professional sports teams:

The Maple Leafs	--	ice hockey
The Argonauts	--	football
The Raptors	--	basketball
The Blue Jays	--	baseball

The Lynx -- soccer
The Rock -- lacrosse

In addition to professional sports, there are many opportunities for the public to participate in organized sports such as hockey, baseball, soccer, and figure skating within every community in the Toronto area.

Golf lovers can practice this popular sport at over 200 courses in the Greater Toronto Area, at a very reasonable price. Good quality public courses can be played for less than Cdn \$50, with world class semi-private courses, including Glen Abbey, the home of the PGA tour Canadian Open is only Cdn \$230 including power cart.

Sport of fishing is practiced year-round in the area surrounding Clarington: Lake Scugog, Rice Lake, the Trent-Severn waterway and Lake Ontario and in particular the Ganaraska River are excellent places to fish.

Less than an hour away begins one of Canada's most famous assets: the Canadian Shield. Famous for its rocks, pine trees, cottages, lakes and rivers, this recreational treasure is close enough to serve as home base; cottages and resorts abound for those who prefer to sample! Prime recreational areas include the Kawartha Lakes, Haliburton, Rice Lake and the communities along the Trent-Severn waterway. Canoeing, hiking, snowmobiling, fishing, waterskiing, personal watercraft, boating, horseback riding and camping are among the more active ways to this unique aspect of Canada's natural heritage.

Special events supporting this experience include heritage celebrations, outdoor museums and opportunities to spend time on-reserve with Canada's native peoples learning about their culture and philosophy

Mosport: Mosport International Raceway was established over 40 years ago as a multi-track facility located north of Bowmanville, Ontario. Mosport features (i) a 2.5 mile, 10 turn road course; (ii) a half-mile, paved oval; (iii) a 1 km. kart track (iv) and the new 1.5 mile Mosport Driver Development Centre. Mosport is one of only 3 tracks in the world to have hosted Formula 1, Can-Am and IndyCar events. Further, Mosport has hosted more Can-Am races than other track - 24. Mosport regularly hosts the American LeMans and CASCAR series events.

8.8.3. **Entertainment:** When looking for something fun to do, there is a myriad of choices from music to theatre to cultural events.

Toronto boasts the second largest concentration of live theatre and music venues in North America, as well as more print, radio and television outlets than any other city in the world. It ranks third as an English-language theatre centre, after London, England and New York, USA. The annual

Fringe Theatre Festival gives over 100 theatre companies an opportunity to stage their alternative productions to a large audience.

Toronto is home to North America's third largest film and television production centre, and is affectionately called "Hollywood North" by the film industry. Many of the small heritage communities around Clarington have also served as locations for feature films and television series such as *Ann of Green Gables*. The Toronto Festival of Festivals is one of the world's most significant film festivals, promoting independent films and launching many film careers.

Musical interests are wide and varied and Toronto's music scene caters to all types of tastes. The Toronto Symphony Orchestra (TSO) is a world-class orchestra that concentrates on classical masters as Bach, Mozart and Beethoven. The Canadian Opera Company, the National Ballet of Canada, Tafelmusik, and Quartetto Gelato are a few of the well-known companies that offer a variety of classic arrangements.

Jazz lovers can see and hear their favourite international musicians as they take part in the International Jazz Festival, the Harbourfront jazz series, and the many venues that feature jazz year round. As for popular music, the summer of 2000 sees bands as varied as Iron Maiden, Bob Dylan, Tracey Chapman, and the Dixie Chicks performing around the region.

Local professional and amateur theatre seasons can also be found in Port Hope, Cobourg, Peterborough and Lindsay – performed in some spectacular 19th-century buildings. Outposts of excellence can be found in the tiniest of communities: imagine the sound of Schubert, accompanied by birds and crickets, performed in the shelter of a valley near Cambellford by Westben Theatre.

Staying current with local and international events is an easy matter with the number of daily newspapers published in Toronto: four in English, one each in French, Chinese and Italian. There are also 79 weekly ethnic papers and over 400 business publications. That makes for a lot of reading!

With all this going on, the Toronto area certainly deserves to be called cosmopolitan!

8.9 AIR TRANSPORTATION

The Greater Toronto Area, being a large business centre and culturally diverse community, is connected to the world by a strong transportation network, especially by most of the major international airlines. Toronto is fortunate to have excellent connections to the rest of the world. Indeed most major cities, and many secondary ones, can be reached directly or with only one connection. This accessibility will

prove most welcome to the international community that will be working at or visiting the Iter site at Clarington.

Air Canada's major hub is at Toronto's major international airport an hour's drive from the Clarington site. From here, many airlines operate non-stop flights from Toronto including:

- Tokyo
- London
- Glasgow
- Paris
- Copenhagen
- Amsterdam
- Frankfurt
- Munich
- Zurich
- Rome
- Tel Aviv
- Plus a long list of destinations in Canada, the United States and the Caribbean.

Many other international airlines offer direct flights from Toronto to their gateway cities. The following airlines have regularly scheduled flights into Toronto:

- Aeroflot Russian
- Aeromexico
- Air France
- Air New Zealand
- Air Ukraine
- Alitalia
- All Nippon Airways
- American Airlines
- American Transair
- America West Airlines
- Ansett Australia
- Atlantic Southeast
- Austrian Airlines
- Bradley First Air
- British Airways
- BWIA International
- Canada 3000
- Canadian Airlines
- Cathay Pacific
- Chataugua Airlines
- Continental Airlines
- Cubana Airlines
- Czech Airlines
- Delta Airlines
- EL AL Israel
- Finnair
- Guyana Airlines
- Henson Piedmont
- KLM Royal Dutch Airlines
- Korean Airlines
- LACSA
- LanChile
- Lauda Air
- LOT Polish Airlines
- LTU International Airlines
- Luftansa
- Malev Hungarian
- Martinair Holland

- Mesa Airlines
- Mexicana Airlines
- Midwest Express Airlines
- Northwest Airlines
- Olympic Airways
- Pakistan International
- Pemair
- Quantas
- Royal Airlines
- SAS Scandinavian Airlines
- SATA International
- Singapore Airlines
- Skyway Airlines
- Thai International Airways
- Trans World Airlines
- Tyrolean Airways
- United Airlines
- US Airways
- Varig Brazil

Many of the daily flights from Canada to Asia depart from the west coast eg: Vancouver, San Francisco, Los Angeles. Toronto has many daily connecting flights to these connections to Asia.

8.10 SUMMARY OF LIVING COSTS

This sub-section provides a summary of the realistic costs expected for a scientist seconded to the Iter project sited at Clarington. Some of these items have been discussed in more detail in the previous sub-sections.

HOUSING (Average Price)

	Single Family	Condominium Townhouse	Apartment
Own:	2,000 ft ² \$200,000	1,200-1,800 ft ² \$130,000	1,200-1,800 ft ² \$124,000
Rent:	\$1,000-\$1,200 *	\$800-\$900/mo *	\$800-900/mo *
Taxes:	.015% of value of home (\$3,000/year)		
Insurance:	\$500.00/year		
* Electricity:	\$2,000.00/year		
* Water:	\$1,000.00/year		
* Gas:	\$2,000.00/year		
Phone:	\$1,200.00/year		
Cable TV:	\$ 500.00/year		
Internet:	\$ 500.00/year		

* Landlord may include a portion of the maintenance fee in the rental rate.

Source: Sutton Group Realty, Statistics Canada

TRANSPORTATION

Price range for a new automobile \$15,000 - \$67,000

Average price for a mid-sized car – GM Oldsmobile

Own: \$30,000.00
Lease: \$425.00/mo (3 year lease)
Insurance: \$1,600 - \$1,800/year
Maintenance: \$120/year (four oil changes per year)
Gasoline: \$0.80/litre

Ontario Driver's License: Required for all European countries. Germany and Austria need their licenses translated. Switzerland requires no translation.
Cost for a 5 year driver's license \$50.00

PUBLIC TRANSPORTATION

GO Train/Bus: \$14.00 from Clarington to Toronto and return.

EDUCATION

Public School: no charge

Private Schools:

Durham Elementary Private Montessori School
Ages 2 ½ to 12 yrs. - \$7,000.00/year full day
\$4,000.00/year half day

Whitby Montessori School
Ages 2 ½ to 6 yrs. - \$6,180.00/year
Ages 6 – 14 years - \$7,130.00/year

Trafalgar Girl's School, Whitby
Grade 6, 7, 8 - \$11,550/year Canadian Border - \$26,670/year
Grade 9 – OAC - \$13,650/year Foreign Border - \$29,390/year

GROCERIES

According to Statistics Canada, a family of four would require approx. \$6,000/year

ENTERTAINMENT

Life Theatre – Toronto - approx. \$90.00 / ticket
Movie - \$12.00 / ticket

INCOME TAX

\$60,009.00 + annual salary: 29% Federal Tax
11.16 % Provincial Tax

Source: Canada Customs & Revenue Agency, Source Deduction – 1-800-959-5525

PROVINCIAL SALES TAX: 8%

GOODS AND SERVICES TAX: 7%

MEDICAL INSURANCE:

Will be covered by Ontario Hospital Insurance, however there is a three month waiting period from the time of arrival in Canada.

Employers to state that the person is here with family and are employed for three years or more. Doctor, Hospital are covered.

Ministry of Health (OHIP) need the following documentation: work permit, visitor's permit (for family), letter from employer that they are employed, driver's license.

Source: Ontario Ministry of Health, 905-434-3700

An overall summary is shown on the next page.

Overall Annual Summary of Household Costs: Senior professional family of four

House rental	\$14,000
Home insurance	500
Electricity	2,000
Water	1,000
Natural gas	2,000
Telephone	1,200
Cable television	500
Internet connection	500
Lease automobile	5,100
Automobile insurance	1,700
Automobile maintenance	200
Gasoline (10,000 km/year)	800
Public transportation	500
Public schools	0
Food	6,000
Entertainment	<u>2,000</u>
Total	\$36,200

8.11 ATTACHMENTS

8-A: Human Resources Development Canada letter

8-A: Human Resources Development Canada letter



Human Resource Centre of Canada
78 Richmond St. W.
Box 837
Oshawa, Ontario
L1G 1E1

11 July 2000

Marketing and Tourism Coordinator,
Economic Development Department,
Municipality of Clarington

Attn: Jennifer Cooke

Dear Jennifer:

Re: Clarington Fusion Energy Research Centre Project

This is in response to your e-mail dated July 6, 2000 to Ms. Olga Myers, regarding the Clarington Fusion Energy Research Centre Project.

Part of Human Resources Development Canada's mission is to enable Canadians to participate fully in the workplace and community by forging partnerships with the provinces and territories, businesses, labour organizations, voluntary organizations and community groups to ensure that Canadians are well served and their local, national and international needs are met. We will continue to remain significant as a national presence and yet relevant to citizens in their communities.

To this end, we would seriously consider opportunities to work in partnership with the Municipality of Clarington, the Durham Region and the Durham Region Business Community, in relation to the above project. The Clarington Fusion Energy Research Centre Project would bring tremendous economic benefit not only to Clarington but to Durham Region and surrounding communities.

We look forward to working with you on this project.

Yours sincerely,

original signed by Judith E. Risebrough

Judith E. Risebrough
Director

cc: R. Reddox
O. Myers
M. Cole

Canada