

IEEE Technical Tour of Central and Eastern Canada
25 August to 3 September 2013

The IEEE History Center's Milestones celebrate technological breakthroughs or turning points, around a number of which the IEEE Life Members Committee (LMC) is organizing technology themed tours. The IEEE Technical Tour of Central and Eastern Canada is planned by IEEE Canada, IEEE Canada Life Members Affinity Group, with the cooperation of seven IEEE Sections in Canada – the Hamilton, Toronto, Peterborough, Ottawa, Montréal, Canadian Atlantic, and Newfoundland & Labrador Sections – as the fourth IEEE Technical Tour.

The tour includes visits to the awarded IEEE Milestones in Canada as well as the related museums and cultural heritages in the districts visited, as shown in the itinerary below. The tour is planned with Life Members and their spouses in mind; all of you are welcome to join the tour as it is a great opportunity to get acquainted with the history of technology and the culture in Canada.

SPACE IS LIMITED! Reserve your place as soon as possible. Registration opens 27 June 2013.

The registration link is <https://secure.effreg.com/register/ieee2013>. More information is available online on the website of IEEE Technical Tour of Canada (http://www.ieee.org/societies_communities/geo_activities/life_members/tech_tour_canada.html), as well as the IEEE Canada website at www.ieee.ca.

Questions concerning the tour should be sent to IEEE Canada LM Chair Mo El-Hawary (elhawary@dal.ca) or IEEE Canada Administrator Cathie Lowell (c.lowell@ieee.org), or to IEEETour@rfa-dmcservices.com.

Tour Costs

The cost of the tour, exclusive of travel in to Toronto and out of St. John's, is as follows:

Single/Double Room: \$2,405.00 Canadian

Guest sharing the same room: \$675.00 Canadian

To avoid the effect of the exchange rate fluctuation, the costs are determined in Canadian dollars.

Registration for the Technical Tour

- Registration opens 27 June 2013.
- Registration must be completed by 31 July.
- Payment must be received by 31 July in order to confirm your participation.
- The tour cost must be paid in Canadian dollars using your credit card at the online registration site: <https://secure.effreg.com/register/ieeee2013>.

Hotel Accommodations and Additional Nights

In connection with this tour, hotel accommodation for all tour participants will be at the following hotels in Toronto, Ottawa, Montréal, Fredericton, Sydney, Gander, and St. John's

- Toronto Delta Airport West Hotel - from Sunday 25 August to 27 August (2 nights)
- Delta Ottawa City Centre Hotel - from Tuesday 27 August to 29 August (2 nights)
- Delta Centreville - Montréal - from Thursday 29 August to 30 August (1 night)
- Delta Fredericton - from Friday 30 August to 31 August (1 night)
- Cambridge Suites - Sydney - from 31 August to 1 September (1 night)
- Comfort Inn Gander - from 1 September to 2 September (1 night)
- Delta St. John's - from 2 September to 3 September (1 night)

Accommodation shall be provided in either double or twin bedded rooms (for occupation by two guests, sharing) or in single bedded rooms (for one guest).

Tour Inclusions

The price of this tour includes the following:

- 9 nights' accommodation package, including 9 breakfasts
- 2 lunches and dinners on Day 2, 3, 4, 5, 6, 7, 8, 9, and 10
- Transportation in accordance with the itinerary from Day 2 to Day 9
- Qualified English speaking guide lecturers to accompany the group throughout all organized activities
- All gratuities and out-of-pocket expenses incurred by guides and drivers
- Harmonized Sales Tax at 13%

Detailed Itinerary

Day 1 – Arrive in Toronto via Pearson International Airport (travel to Toronto at your own expense) and travel by shuttle (free) to the Delta Toronto Airport West hotel. On own for all meals this day.

Day 2 – Breakfast at the hotel then travel by bus to Paris Ontario for the first milestone plaque. **First Distant Speech Transmission in Canada, 1876 - [IEEE Hamilton Section](#)**

On 10 August 1876, Alexander Graham Bell demonstrated on this site that the human voice could be transmitted electrically over distance. While family members spoke into a transmitter in Brantford, 13 km away, Bell was able to hear them at a receiver located here. This test convinced Bell that his invention could be used for communication between towns and could compete successfully with the telegraph.

The plaque is publicly viewable at 91 Grand River N, Paris, Ontario. You will then have time to wander the beautiful town of Paris and have lunch before leaving for St. Catharines around 12 pm.

Milestone #2 - DeCew Falls Hydro-Electric Plant, 1898 - [IEEE Hamilton Section](#)



The DeCew Falls Hydro-Electric Development was a pioneering project in the generation and transmission of electrical energy at higher voltages and at greater distances in Canada. On 25 August 1898 this station transmitted power at 22,500 Volts, 66 2/3 Hz, two-phase, a distance of 56 km to Hamilton, Ontario.

Using the higher voltage permitted efficient transmission over that distance.

The plaque can be viewed at the DeCew Falls Generating Plant No. 1. Here a guide will walk you through a tour of the plant. No open toed or high heeled shoes or flowing skirts will be allowed on this tour due to the nature of the operating machinery.



After the Decew tour participants will be bused to nearby Niagara Falls to sightsee. Possible sights of interest other than the many falls related attractions, include the 1905 Rankine Generating Station, and Nikola Tesla Monument which is located at Table Rock at the top of the falls.

The group will be back at the Toronto Delta Hotel for dinner hosted by the IEEE Toronto Section.

Day 3 – Breakfast at the hotel then leave at 9 am for the C.H. Best Institute in Toronto.

Milestone #3 - First External Cardiac Pacemaker, 1950 - [IEEE Toronto Section](#)

In 1950, in Room 64 of the Bantling Institute of the University of Toronto, Drs. Wilfred Bigelow and John Callaghan successfully paced the heart of a dog using an external electronic pacemaker-defibrillator having implanted electrodes. The device was developed by Dr. John Hopps at the National Research Council of Canada. This pioneering work led to the use of cardiac [pacemakers](#) in humans and helped establish the importance of electronic devices in medicine.

A guide will meet you outside the building where the plaque is located.

At 11 am the tour will continue on to Peterborough, Ontario where the IEEE Peterborough Section will host a lunch at the Canadian Canoe Museum with a short tour of Peterborough to follow. The tour will continue on to Ottawa at approximately 3 pm. Dinner will be at the Delta Ottawa City Centre.

Day 4 – Breakfast at the hotel and at 9 am depart for Nepean, Ontario to **Milestone #4 - Alouette-ISIS Satellite Program, 1962 - [IEEE Ottawa Section](#)**



Driven by the need to understand the characteristics of radio communication in Canada's North, Canadian researchers focused on the exploration of the earth's upper atmosphere, the ionosphere. Canada's satellite program commenced with the launch of Alouette-I on September 29, 1962. Alouette-II followed in 1965, ISIS-I in 1969, ISIS-II in 1971. The Alouette/ISIS tracking antenna serves as a

reminder of Canada's contribution to this international effort in space science. The plaque can be viewed at the Shirley's Bay Research Centre, Nepean, Ottawa, in Ontario. A guide will be given of this area.

The tour will return to down town Ottawa around lunch time. Participants are free to tour the downtown area for the afternoon. A dinner hosted by the IEEE Ottawa Section will take place at the hotel in the evening.

Day 5 – Breakfast at the hotel and depart at 9 am for Montréal, Québec. Lunch at the Delta Centreville Hotel. Depart hotel at 2 pm to **Milestone #5 - First 735 kV AC Transmission System, 1965 - IEEE Quebec Section**

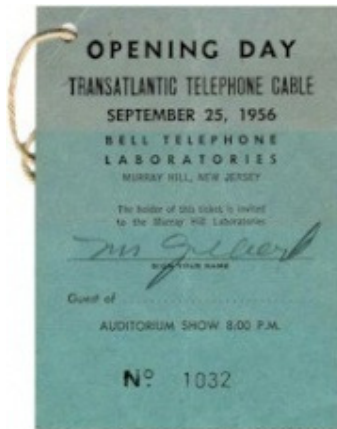
Hydro-Quebec's 735,000 volt electric power transmission system was the first in the world to be designed, built and operated at an alternating-current voltage above 700 kV. This development extended the limits of long-distance transmission of electrical energy. On 29 November 1965 the first 735 kV line was inaugurated. Power was transmitted from the Manicouagan-Outardes hydro-electric generating complex to Montreal, a distance of 600 km.

The plaque can be viewed at the headquarters of Hydro-Quebec 75 Boulevard René-Lévesque Ouest, Montréal, QC; and at the Manicouagan 2 Hydroelectric Generating station, on the south end of the Manicouagan Reservoir on highway 38. A tour will be provided at the Montreal HQ. For partners there are many shops and site seeing opportunities for the afternoon. Dinner back at the hotel

Day 6 – Breakfast at the hotel and depart for Fredericton, New Brunswick at 9 am. Arrive in Fredericton around 6 pm for dinner at the hotel. Lunch stop along the way.

Day 7 – Breakfast at the hotel and depart for Sydney, Nova Scotia. Stop in Baddeck, N.S. to view Alexander Graham Bell Museum and have lunch. Arrive in Sydney for dinner.

Day 8 – Breakfast at hotel and depart for Sydney Mines for tour of **Milestone # 6 - The First Submarine Transatlantic Telephone Cable System (TAT-1), 1956**



Global telephone communications using submarine cables began on 25 September 1956, when the first transatlantic undersea telephone system, TAT-1, went into service. This site is the eastern terminal of the transatlantic cable that stretched west to Clarenville, Newfoundland. TAT-1 was a great technological achievement providing unparalleled reliability with fragile components in hostile environments. It was made possible through the efforts of engineers at AT&T Bell Laboratories and British Post Office. The system

operated until 1978.

The plaques can be viewed in three locations: at 52 Cormack Dr., Clarenville, Newfoundland, Canada; at the Cape Breton Fossil Centre in Sydney Mines on Cape Breton Island, Canada; and in Gallanach Bay, in Oban, Scotland. The tour will be visiting Sydney Mines.

The bus will leave the mines to catch the 12:00 pm ferry from North Sydney to Newfoundland.

Day 9 – Breakfast at the hotel. Depart at 9 am for Hearts Content, Newfoundland to visit **Milestone #7 Landing of the Transatlantic Cable, 1866** - IEEE Newfoundland-Labrador Section



A permanent electrical communications link between the old world and the new was initiated at this site with the landing of a transatlantic cable on July 27, 1866. This achievement altered for all time personal, commercial, and political relations between peoples on the two sides of the ocean. Five more cables between Heart's Content and Valentia, Ireland were completed between 1866 and 1894. This station continued in operation until 1965.

The plaque can be viewed at the Heart's Content Cable Station, Provincial Historic Site in Heart's Content, Newfoundland. Lunch in Heart's Content. Depart for St. John's at approximately 1:30. Arrive in St. John's and visit Signal Hill to view **Milestone #8 - Reception of Transatlantic Radio signals, 1901** - IEEE Newfoundland-Labrador

Section



At Signal Hill on December 12, 1901, Guglielmo Marconi and his assistant, George Kemp, confirmed the reception of the first transatlantic radio signals. With a telephone receiver and a wire antenna kept aloft by a kite, they heard Morse code for the letter "S" transmitted from Poldhu, Cornwall. Their experiments showed that radio signals extended far beyond the horizon, giving radio a new global dimension for communication in the twentieth century.

The plaque can be viewed in Signal Hill National Park, St. John's, Newfoundland, Canada.

Arrive at Delta St. John's for dinner hosted by the IEEE Newfoundland & Labrador Section.

Day 10. Breakfast at leisure at the hotel. After breakfast, the tour is officially complete. Depart St. John's on your own.

Legal and Financial Information

This Tour has been designed to be as cost effective as possible for the travelers and is not an opportunity to raise funds for the IEEE Foundation. However, that said, it is not designed to lose money either.

Travelers must realize that there are many uncertainties in organizing functions months in advance where determining cost is very difficult, plus the exchange rate between countries' currency is subject to change depending upon economic conditions at any given time.

Please note that travelers are responsible for ordinary incidents - trip cancellation for health reasons, weather cancellations, etc. - many of which can be covered by **travel insurance** that you can purchase separately through a travel agency, which should be seriously considered.

The price for the tour is based on a price per person, either a single or a double (\$2,405.00/pp Cdn \$675 for second person sharing the same room), and includes the hotel, as well as land and ferry costs. The contracted price is based on a minimum

group size of 30 paying guests. If fewer than 30 guests wish to make the tour, Roni Feldman & Associates has reserved the right to adjust the price as may be necessary. If less than 30 have completed their full tour payments by 31 July 2013, those who have registered and paid will be contacted to explain any changes in the cost per person for the Tour. IEEE reserves the right to cancel the complete tour if insufficient individuals register for this Tour.

Cancellations and Attrition Penalties

Individuals who register for this Tour agree to the following terms concerning Cancellations.

Individuals wishing to cancel as a result of unforeseen circumstances will be subject to the following penalties upon the specific dates and amounts listed:

- Before 1 July: Non-Penalty
- After 1 July and before 31 July: 10%
- After 13 July and before Aug 14: 20 %
- After 14 August and before 19 August: 30 %
- After 20 August: 100 %

Hotels, Airports, and Transfers

Delta Toronto Airport West Hotel

<https://www.deltahotels.com/Hotels/Delta-Toronto-Airport-West>

Getting to the Hotel from the Pearson International Airport in Toronto

Upon arrival call for the Delta Shuttle (free) to take you directly to the hotel.

Delta St. John's Hotel

<https://www.deltahotels.com/Hotels/Delta-St.-John-s-Hotel-Conference-Centre>

Getting to the Airport from the hotel in St. John's - There is no shuttle from the hotel to the airport, but the concierge will be able to make taxi arrangements for you.