



OCTOBER 2012 PROGRESS REPORT

Let's Talk Energy
Engaging ideas for Canada's future



Parlons énergie
Idées d'avenir pour le Canada

LET'S TALK ENERGY — ENGAGING IDEAS FOR CANADA'S FUTURE, is a national multi-year program exploring Canada's energy system from production through consumption, aiming at enhancing energy awareness and literacy among Canadians to contribute to a sustainable energy future for Canada.



MESSAGE FROM THE PRESIDENT AND CEO, CANADA SCIENCE AND TECHNOLOGY MUSEUMS CORPORATION

WHAT A FASCINATING YEAR IT HAS BEEN

It has been both a fascinating and an exciting year since our last progress report on **LET'S TALK ENERGY!** Mike Cleland has accepted to co-chair the National Advisory Committee. Mike is currently Nexen's Executive in Residence at the Canada West Foundation and a private consultant. The Committee will greatly benefit from Mike's extensive experience in energy and environment policy from multiple perspectives. Within the Canada Science and Technology Museums Corporation, Ellen Burack has come on board as the new Director General, Energy Initiative. We're thrilled to be able to count on their leadership to improve Canadians' understanding of the complexity of energy issues, and to get Canadians engaged in discussions about our energy future.

Many organizations took the opportunity this year to highlight the importance of improving energy literacy in Canada. Some organizations became further involved in efforts to this end, like the Pembina Institute with its multi-media project to help Canadians better understand clean energy. Others, like the Canadian Council of Chief Executives, the Energy Policy Institute of Canada and the Senate Committee on Energy, the Environment and Natural Resources emphasized the importance of initiatives like ours to support Canadians in making informed energy choices so that they can contribute to improved energy efficiency and conservation.

While our first year focused mainly on launching three national energy exhibitions, and establishing the base of a national network as the foundation of the six-year program, our second year's efforts were concentrated on reaching out farther across the country. We expanded and deepened our national networks of partners, museums, and science centres, as well as our web and social media initiatives.

There are more exciting projects for the years ahead. We can't wait to get them off the ground, and to share our progress and our plans with you! We continue to be open to more partnerships.



CMA RECIPIENT
RÉCIPIENDAIRE AMC

ROY L. SHAFER LEADING EDGE AWARD FOR LEADERSHIP IN THE FIELD BY THE ASSOCIATION OF SCIENCE-TECHNOLOGY CENTERS

On October 13, 2012, Canada Science and Technology Museums Corporation CEO Denise Amyot was awarded the Roy L. Shafer Leading Edge Award for Leadership in the Field by the Association of Science-Technology Centers (ASTC) at their annual conference in Columbus, Ohio. The Roy L. Shafer Leading Edge Awards are presented annually to ASTC members and/or their employees in recognition of extraordinary accomplishments that not only enhance the performance of their own institutions, but also significantly advance the mission of science-technology centres and museums. It was Ms Amyot's leadership in developing the **LET'S TALK ENERGY** Initiative that earned her the ASTC's recognition. In accepting the award, Ms Amyot was able to share the honour with several Museum Affiliated Partner Program members who were also in attendance.

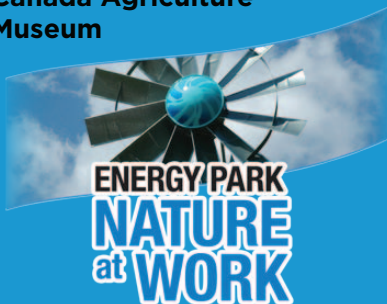


ASSOCIATION OF
SCIENCE-TECHNOLOGY
CENTERS
INCORPORATED



ENERGY: ONE THEME, THREE MAJOR EXHIBITIONS IN THREE OF CANADA'S NATIONAL MUSEUMS

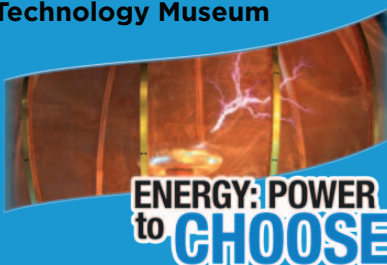
Canada Agriculture
Museum



Canada Aviation and
Space Museum



Canada Science and
Technology Museum



FASCINATING EXHIBITIONS

LET'S TALK ENERGY includes cornerstone exhibitions in three national museums, as well as a broad range of activities and partnerships across the country.



The Canadian Museums Association recognized **LET'S TALK ENERGY** with a special award of honourable mention during its Annual Gala on April 25, 2012. The Corporation is extremely honoured by this national recognition for **LET'S TALK ENERGY's** three exhibitions from a jury of peers.

THE THREE EXHIBITIONS

The Canada Agriculture Museum's **Energy Park: Nature at Work** offers visitors an opportunity to stroll through an entertaining and informative exhibition that explores energy use on Canadian farms. The exhibition shows how technologies for harvesting energy from renewable resources are changing both the consumption and the production of energy in agriculture.

Green Skies Ahead, at the Canada Aviation and Space Museum, takes visitors on a tour of the innovative energy technologies that will shape commercial aviation over the next 50 years. Visitors are encouraged to explore the fuel, cost, and carbon savings of these new technologies, as well as their impact on the future of travel.

The Canada Science and Technology Museum's exhibition, **Energy: Power to Choose**, invites visitors to explore the social, economic, and environmental implications of energy production, distribution, and consumption in a way that is both factual and entertaining. This interactive experience encourages visitors to examine their own energy choices, and offers practical tips on reducing consumption. Visitors can also produce electrical energy by running on a human hamster wheel, and learn more about unusual forms of energy in nature, such as electric eels.

In the first year, more than 700,000 visitors have had the opportunity to experience these exhibitions.





INFORMATION KIOSKS

The deployment of **LET'S TALK ENERGY** information kiosks is well underway from coast to coast. These kiosks have been designed to provide an engaging overview of energy in Canada, and to be located in public venues such as science centres, museums, academic institutions, and airport terminals. The kiosks include material from **LET'S TALK ENERGY** partners such as Pollution Probe, SEEDS Foundation, and the Centre for Energy.

Kiosks have been installed at Science World British Columbia in Vancouver, British Columbia; the Leduc #1 Energy Discovery Centre in Devon, Alberta; The Manitoba Museum in Winnipeg, Manitoba; the Discovery Centre in Halifax, Nova Scotia; the Eptek Art & Culture Centre in Summerside, P.E.I.; the Biosphère in Montreal, Quebec; La Cité de l'énergie in Shawinigan, Quebec; the Musée du Fjord in La Baie, Quebec; the Sherbrooke Museum of Nature and Science in Sherbrooke, Quebec; and, at the Canada Science and Technology Museum in Ottawa, Ontario. More venues are being added all the time, and recommendations for new venues are welcome.



WATT'S UP? — A POPULAR TRAVELLING EXHIBITION

Watt's Up? Renewable Energy is currently on display at the Muskoka Boat & Heritage Centre in Gravenhurst, Ontario, and will be featured at the Woodstock Museum National Historic Site in Woodstock, Ontario, starting April 2013.

This travelling exhibition examines energy efficiency in the context of household energy consumption, sources of renewable energy, and possible future energy sources. It is sponsored by **LET'S TALK ENERGY** and developed in conjunction with the Saskatchewan Science Centre in Regina, THEMUSEUM in Kitchener, Ontario, and the Sherbrooke Museum of Nature and Science in Quebec. So far, the exhibition was presented at the Sherbrooke Museum of Nature and Science from September 16, 2011, to January 9, 2012, the New Brunswick Museum in Saint John from January 19 to April 3, 2012, and the London Children's Museum in Ontario from April 12 to July 1, 2012. For information on **Watt's Up**, visit www.naturesciences.qc.ca/en/event/watts-up-renewable-energy-2/.





ENERGY TAKES CENTRE STAGE

ENGAGING PROGRAMMING

At the Canada Agriculture Museum, more than 3,300 adults and children participated in **Harvesting Energy**, the Museum's annual Thanksgiving event in 2011. While visitors discovered foods harvested in the fall, they also explored how farms produce energy from sources such as the sun, wind, and crops. The **Windmill: Wind at Work** demonstration explained how energy from the wind is harnessed by windmills and wind turbines and used for many different purposes such as milling and grinding grain, pumping water, and generating electricity.

March Break programs at the Canada Aviation and Space Museum were designed to get visitors thinking about the importance of energy conservation and of the "greening" of technology in every aspect of their lives, including air travel. Activities included junkyard airplane building workshops, and a highly successful event where over 150 children ages 4 to 14 brought in aviation inspired LEGO creations reflecting the theme of energy efficiency in the aerospace sector. In addition, the new **Pull, Twist, and Squish** school program that presents advances in technology used

to make aircraft more energy efficient was a great success. Over 75 teachers and students have participated in the program.

The Canada Science and Technology Museum offered special events celebrating the environment and energy conservation. On March 31, a star party for Earth Hour presented in association with Hydro Ottawa and the City of Ottawa attracted more than 600 people. Another 1,000 visitors attended on April 22 for Earth Day's eco-friendly activities, which included an eco-quest scavenger hunt and a workshop on building robots from recycled materials. In celebration of Energy Days, the Museum held a special depot, collecting more than 5.5 tonnes of electronic waste, and where visitors enjoyed a display of electric and human-powered vehicles from the Electric Vehicle Council of Ottawa.

Energy related content is also found in various Museum demonstrations, workshops, and programs such as birthday parties, guided tours, school programs, Café Scientifiques, Science Talks, overnight programs, and educational web offerings.

VIRTUAL TOOLS

Explore Energy

NEW

Forays into web and social media have been a focus of the initiative over the past year. A new tool being developed for the website, entitled **Explore Energy**, features a map of Canada populated by users with sites across the country where Canadians can learn something about energy, including research centres, colleges and universities, green buildings, refineries, wind farms, and more. Features allow users to sort the information to plan their visits, and to comment on their experiences to help others to learn more. Watch for **Explore Energy** coming soon to the **LET'S TALK ENERGY** website at www.energy.technomuses.ca.

Watch, Learn, and Talk Energy

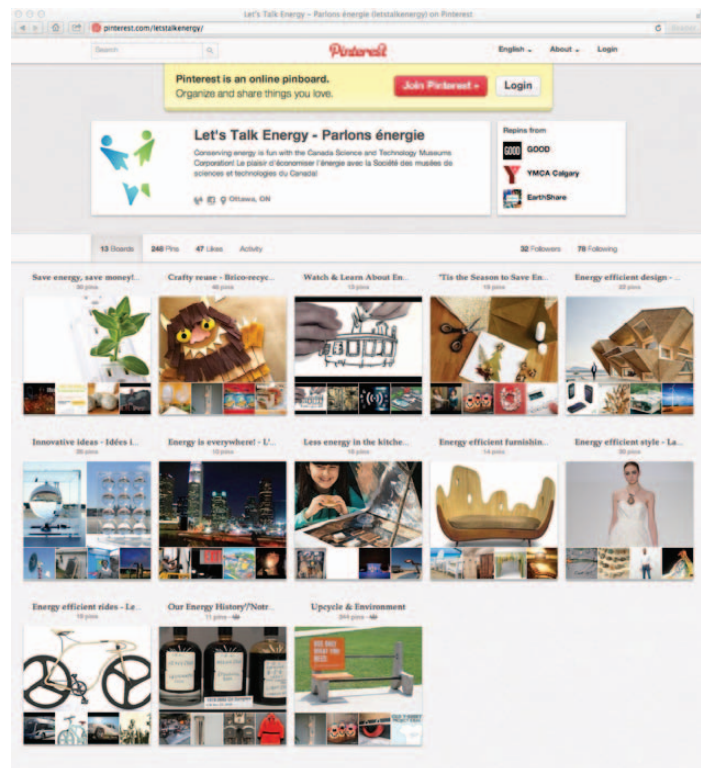
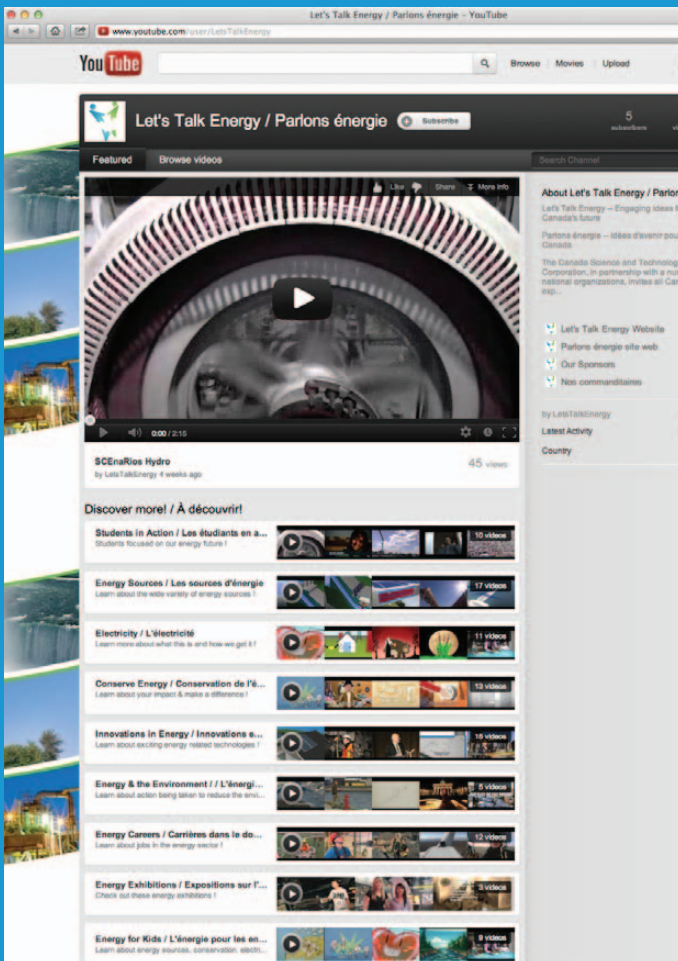
NEW

LET'S TALK ENERGY is now on YouTube! The **LET'S TALK ENERGY'S** YouTube channel features educational and informative video playlists, in addition to original productions such as movies prepared by high school students who participated in the initiative's **SCEnaRios** project (read more about **SCEnaRios** further on).

Pinterest

NEW

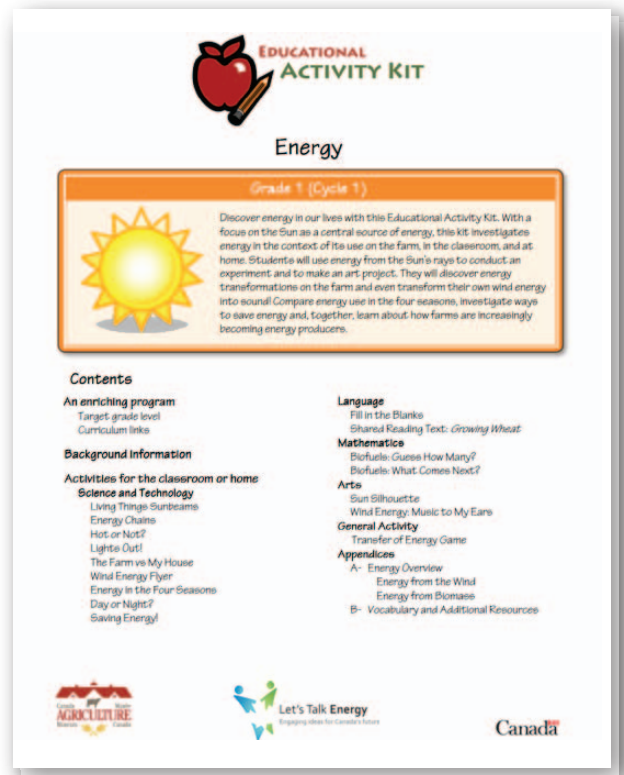
LET'S TALK ENERGY is also on the social media platform Pinterest, a virtual pin board that uses beautiful images to inspire users to discover new things. By sharing energy efficient recipes, designs, fashions, vehicles, and more, **LET'S TALK ENERGY** broadens its audience and continues to solidify its online presence.



Twitter — @enertweets and #talkenergy

NEW

Follow us on Twitter! Daily original and re-broadcast messages by @enertweets engage followers in discussions about technological developments, energy sources, energy efficiency ideas, environmental considerations, and much more. The hashtag #talkenergy connects with others talking about these important issues. An energizing two-week conversation between Hydro Ottawa and **LET'S TALK ENERGY** appeared on the live twitter wall in the **Energy: Power to Choose** exhibition at the Canada Science and Technology Museum during the summer. Many others joined the @enertweets and @hydroottawa discussion and shared great energy conservation tips and information.



Online Educational Activity Kit

NEW

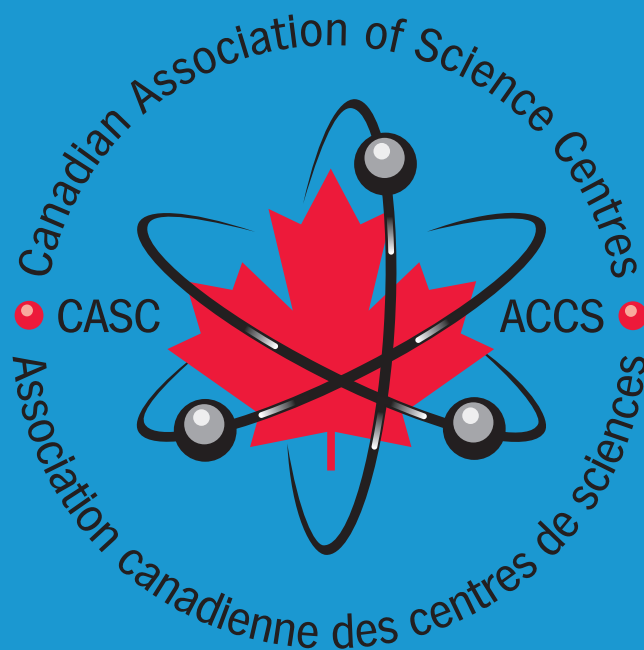
With a focus on the Sun as a central source of energy, this kit produced by the Canada Agriculture Museum, and launched on Earth Day, investigates energy in the context of its use on the farm. Designed for grade 1 students and teachers, activities include using energy from the Sun's rays to conduct an experiment and to make an art project; discovering energy transformations on the farm, including transforming wind energy into sound and comparing energy use in the four seasons; investigating ways to save energy; and, learning how farms are increasingly becoming energy producers. In its first six months the kit was downloaded more than 560 times and is available on the Canada Agriculture Museum's website at www.agriculture.technomuses.ca.

SPECIAL PROJECTS

Summer Institute for Elementary Teachers

For a second year the Canada Science and Technology Museum hosted the Summer Institute for Elementary Teachers (SIET), a three-day workshop for elementary-level teachers on how to teach science. The sold-out workshop gathered 31 teachers from communities across Canada, including the Northwest Territories, Manitoba, and Newfoundland and Labrador.

The 2012 SIET field trip included visits to the Hydro Ottawa run-of-the-river power generating station on the Ottawa River at Victoria Island, as well as two geological site visits along the shores of the Ottawa River with presenters from the Geological Survey of Canada and Carleton University.



CASCADE Award for Best Energy Literacy Project

This year **LET'S TALK ENERGY** entered into a partnership with the Canadian Association of Science Centres (CASC) to introduce an annual CASCADE award recognizing the Best Energy Literacy Project. The award was presented for the first time at the Association's annual conference on May 5, to Science World British Columbia's BC Green Games initiative. This province-wide program was created to increase students' awareness of environmental issues and the students' ability to become local leaders and improve sustainable practices in everyday life. Energy conservation and efficiency are central themes of this annual contest. Congratulations Science World British Columbia!

More information on BC Green Games and all projects nominated for this award is available at www.bcgreengames.ca and www.canadiansciencecentres.ca/?n=7-123&lang=1.



RIO+20
United Nations
Conference on
Sustainable
Development



LET'S TALK ENERGY at Rio+20

NEW

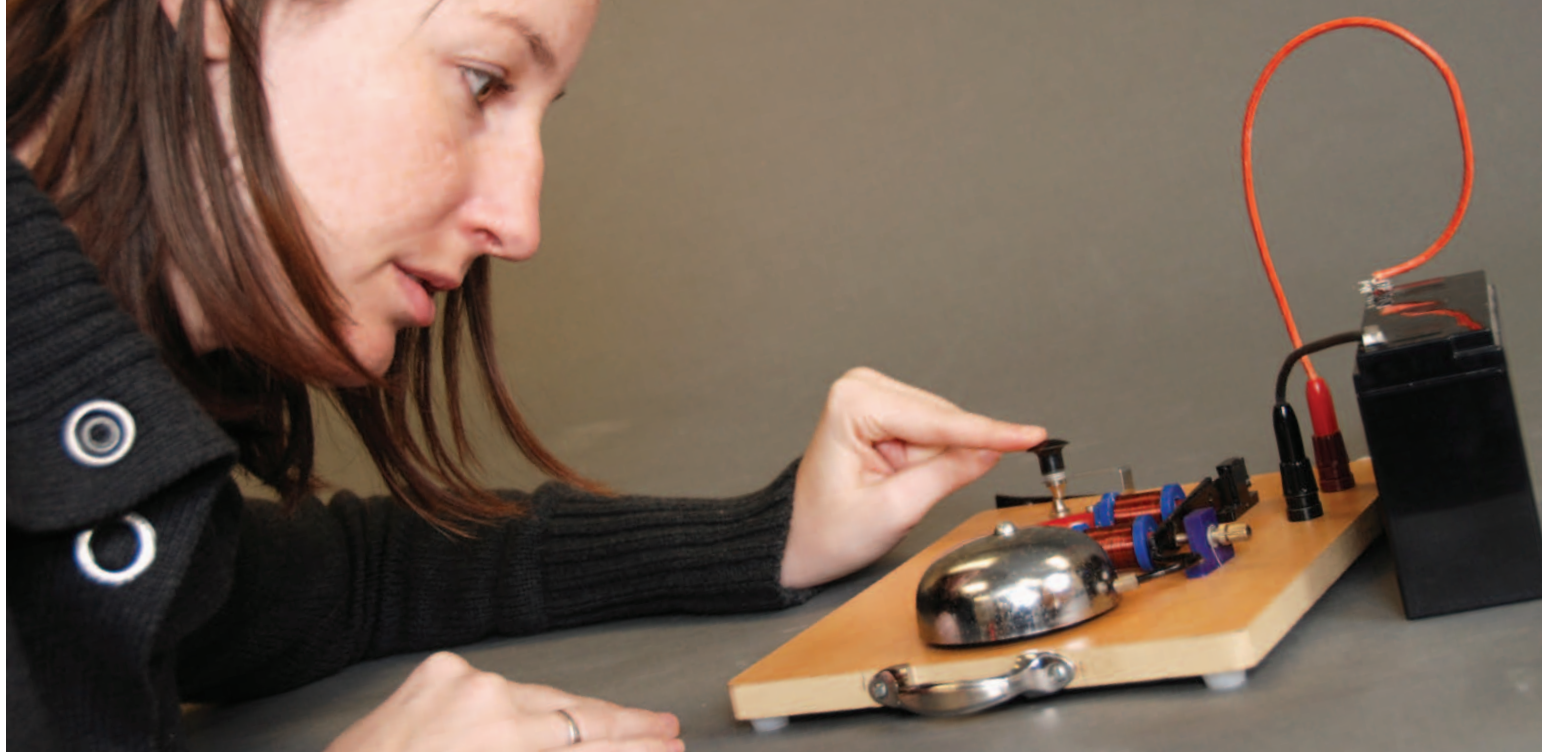
LET'S TALK ENERGY facilitated the participation of students from Brookfield High School in Ottawa in **SCEnaRios**, an initiative sponsored by the Association of Science-Technology Centers (ASTC). Students spent ten months learning about the past, present, and future of energy production and use, and engaged with students in Denmark and the United States to discuss the future of sustainable energy. Students from the three countries shared their experiences through a series of online discussions. The Ottawa students produced collaborative video projects, one on their overall experience, one showcasing a trip to a wind farm, and one about their experience at a hydro power generating station. The videos can be viewed at www.youtube.com/user/LetsTalkEnergy?feature=guide. The students also joined a video conference during the Rio+20 United Nations Conference on Sustainable Development, in which they discussed various aspects of sustainable development with peers from 12 countries.



American Association for the Advancement of Science Display

The Canada Science and Technology Museums Corporation collaborated with Natural Resources Canada, Environment Canada, the University of Alberta, the Canadian Space Agency, and the National Research Council to produce a display on energy as part of the Canada Pavilion at the American Association for the Advancement of Science (AAAS) annual conference in Vancouver in February 2012. The display showcased new Canadian technologies developed to improve the environmental footprint of energy-related industries, including environmental monitoring, descriptions of ocean technologies, information on a solar tracker system, and a Zero Energy House.

This five-day AAAS conference — billed as the world's largest general science conference — attracted a record-breaking 12,478 participants this year, and was held outside the United States for the first time in decades.



Senate Standing Committee on Energy, the Environment, and Natural Resources

On November 1, 2011, the Canada Science and Technology Museums Corporation appeared before the Senate Committee on Energy, the Environment, and Natural Resources to speak about **LET'S TALK ENERGY**.

The presentation demonstrated how the Museums and **LET'S TALK ENERGY** partners are well positioned to lead a national energy literacy campaign in Canada. Committee members commended the Corporation and its partners for this ambitious and unique program — a first of its kind in the world.

On July 19, 2012, the committee released their report on Canada's energy future. The report, entitled *Now or Never: Canada Must Act Urgently to Seize Its Place in the New Energy World Order*, outlines 13 priorities for action to achieve long-term and affordable energy solutions, addressing the challenges and opportunities of responsible development and energy efficiency. The Corporation's efforts towards increasing energy literacy through the **LET'S TALK ENERGY** initiative are applauded in the report.

For more information, visit www.parl.gc.ca/Content/SEN/Committee/411/ENEV/DPK-Energy/home-e.htm.

Travelling Edukits

The Canada Science and Technology Museum continued to offer two energy themed Edukits to schools across the country.

Each kit includes bilingual information, activity plans, and materials to carry out hands-on lessons on energy subjects at both the elementary and secondary school levels. Students discover how energy is produced in today's world with the **Energy for Tomorrow** Edukit and explore the basics of electrical circuitry by examining automotive technology with the **Alternative Energy and Green Vehicle Technologies** Edukit. For more information visit www.sciencetech.technomuses.ca/english/schoolzone/edukit.cfm.



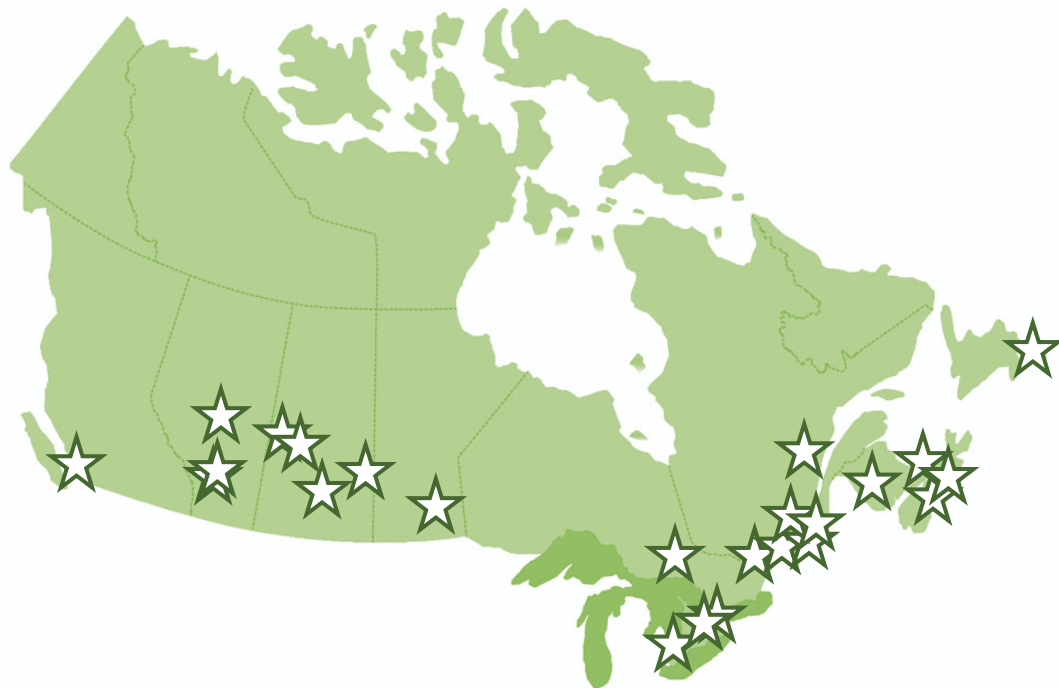
THE COLLECTION

Tidal Turbine

The Canada Science and Technology Museum added a large tidal turbine designed and manufactured by Clean Current Power Systems Inc. of Vancouver, British Columbia, to its collection of artifacts. The turbine was tested on both the Atlantic and the Pacific coasts of Canada.

www.youtube.com/watch?v=YxcsiJH3cK0





UNIQUE PARTNERSHIPS

MUSEUM AFFILIATED PARTNERS PROGRAM

The Museum Affiliated Partners Program (MAPP) is a national network of museums and science centres that collaborate and contribute to **LET'S TALK ENERGY**. The network includes 25 partners representing 28 locations across Canada.

- Biosphère, Environment Museum
Montreal, Quebec
- Canada Agriculture Museum
Ottawa, Ontario
- Canada Aviation and Space Museum
Ottawa, Ontario
- Canada Science and Technology Museum
Ottawa, Ontario
- Canadian Nuclear Safety Commission
Ottawa, Ontario
- Discovery Centre
Halifax, Nova Scotia
- Eptek Art & Culture Centre
Charlottetown, Prince Edward Island
- Glenbow Museum
Calgary, Alberta
- Johnson GEO Centre
St John's, Newfoundland and Labrador
- La Cité de l'énergie
Shawinigan, Quebec
- Leduc #1 Energy Discovery Centre
Devon, Alberta
- Maritime Museum of the Atlantic
Halifax, Nova Scotia
- Sherbrooke Nature and Science Museum
Sherbrooke, Quebec
- Musée du Fjord
La Baie, Quebec
- Musée minéralogique et minier de Thetford Mines
Thetford Mines, Quebec
- Museum of Industry
Halifax, Nova Scotia
- Oil Museum of Canada
Oil Springs, Ontario
- Ontario Science Centre
Toronto, Ontario
- Science East
Fredericton, New Brunswick
- Science North
Sudbury, Ontario
- Science World British Columbia
Vancouver, British Columbia
- TELUS Spark
Calgary, Alberta
- The Manitoba Museum
Winnipeg, Manitoba
- THEMUSEUM
Kitchener, Ontario
- Western Development Museum
Moose Jaw, North Battleford, Saskatoon, and Yorkton, Saskatchewan



LET'S TALK ENERGY Newsletters Featured MAPP Partner Achievements

Western Development Museum, Saskatoon, Saskatchewan

The Western Development Museum (WDM) is currently re-creating a straw gas car and balloon, inspired by experiments into the use of straw as an alternative fuel source at the University of Saskatchewan in 1917. www.wdm.ca

Glenbow Museum, Calgary, Alberta

The Glenbow Museum's Library and Archives in Calgary holds one of the largest archival collections relating to the Canadian petroleum industry. Further information about these materials can be found at www.glenbow.org/collections/search/.

Biosphère, Montreal, Quebec

In order to increase public awareness of renewable energy sources, the Biosphère has acquired two wind turbines to convert the wind's kinetic energy into electricity. www.ec.gc.ca/biosphere/default.asp?lang=En&n=13ECD48-1.

La Cité de l'énergie, Shawinigan, Quebec

For millennia, humankind's only sources of energy were fire, wind, water, and physical strength. What will be tomorrow's energy sources? The exhibition **The Ages of Energy** takes a fresh look at the energy issues that have dominated global headlines. www.citedelenergie.com

The Latest News from MAPP Partners

The Manitoba Museum

Visitors to The Manitoba Museum's Science Gallery during the summer were invited to Get Zapped! in this new interactive workshop on the basics of electricity. The centrepiece of the workshop was a small-scale hydro generating station where visitors controlled the flow of water in order to power a bank of LED lights. Visitors also tested various objects to see if they were insulators or conductors, and simulated tripping an electric fuse.

Science World British Columbia

Science World's BC Green Games is an annual digital media contest designed to encourage Kindergarten to grade 12 students from across British Columbia to document and share their environmental action stories on topics such as energy conservation, transportation, schoolyard greening, recycling, composting, and community stewardship. This program enables teachers to teach environmental sustainability concepts and inspires students and communities to be more effective, efficient, and environmentally responsible for years to come. BC Green Games reaches out to students, parents, teachers, administrators, and the general public. To learn more about the program and view winning projects visit www.bcgreengames.ca.

TELUS Spark — LET'S TALK ENERGY's Newest Partner

Calgary's new science centre opened its doors to the public on October 29, 2011. One of its five new exhibit galleries is Energy & Innovation, sponsored by Petrobank Energy and Resources Ltd, PetroBakken Energy Ltd, and Petrominerales Ltd, where visitors explore energy transformation and what it means to our future. Through hands-on experiences and programs, visitors learn the fundamental rules that govern energy while stretching their problem-solving, collaboration, and experimentation capabilities as they probe one of the most complicated challenges facing our modern society: how will the energy system we all depend upon evolve? Energy presents some of the thorniest and most exciting challenges around: how to get it, move it, store it, and use it. In order to develop safer, cheaper, and more efficient ways of harnessing energy, innovation is a must. As visitors explore the nature of energy, they will begin to see the connections between its different forms and the roles it plays in their daily lives. www.sparkscience.ca



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Canada Science and Technology Museums Corporation

The Canada Science and Technology Museums Corporation is committed to electricity conservation at its three museums. A recent \$56,000 incentive from the saveONenergy RETROFIT PROGRAM for a chiller project was used toward a lighting retrofit project for the installation of over 1,700 LED lights. The Corporation has also put energy conservation front and centre with the Let's Talk Energy Exhibits – Energy: Power to Choose, Green Skies Ahead, and Energy Park: Nature at Work. Hydro Ottawa salutes the Canada Science and Technology Museums Corporation its commitment to conservation in the operation of their facilities and the educational impact of their exhibits.

[Watch the video](#)[Read the news release](#)

Canada Science and Technology
Museums Corporation

Canada Agriculture Museum
Canada Aviation and Space Museum
Canada Science and Technology Museum



New Greening Initiatives at the Canada Science and Technology Museums Corporation Recognized by Hydro Ottawa

The Canada Science Technology Museums Corporation doesn't just talk about saving energy! This year Hydro Ottawa recognized the Corporation's energy efficiency efforts and innovative conservation projects with the Companies for Conservation Award.

Since upgrading the cooling system at the Canada Aviation and Space Museum, retrofitting 1,700 fixtures with LED lights at the Canada Science and Technology Museum, and installing solar panels at the Canada Agriculture Museum, the Corporation has seen its energy consumption decrease, and has contributed to creating a culture of energy conservation in the community.

Visit www.hydroottawa.com/c4c to view a video about these energy efficiency improvements and follow the Canada Agriculture Museum's solar array at www.enlighten.enphaseenergy.com/public/systems/PaW830585?locale=en-US&site_id=30585.

SPONSORS AND CONTRIBUTORS

LET'S TALK ENERGY initiatives are made possible through generous sponsorships, donations, and contributions.

Major Sponsors:



**Imperial Oil
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Supporting Sponsors:



Contributing Sponsors:

Bombardier // Canadian Association of Petroleum Producers // Canadian Centre for Energy Information // Canadian Gas Association // Canadian Wind Energy Association // Environment Canada // Green Aviation Research and Development Network // Natural Resources Canada // OpenText Corporation // RBC Foundation

Content contributors to the **LET'S TALK ENERGY** exhibitions in the National Capital Region:

Energy Park: Nature at Work at the Canada Agriculture Museum:

Agriculture and Agri-Food Canada // Arntjen North America // Arntjen Solar // Big Ass Fans // Canadian Solar // Ecotay Education Centre // iSolara // Koenders Windmills

Green Skies Ahead at the Canada Aviation and Space Museum:

Green Aviation Research and Development Network

Energy: Power to Choose at the Canada Science and Technology Museum:

Agriculture and Agri-Food Canada // Aqua Lung International // Argus Machine Company Ltd // Atlas Copco // Canadian Association of Petroleum Producers // Centre for Energy // Canadian Gas Association // Choi+Shine Architects // ConocoPhillips // Cyrium Technologies // Energy Aware Technology Inc. // Enwave Energy Corporation // Fairbank Oil // K-Line Insulators Ltd // Konarka Power Plastics // National Research Council Canada // Natural Resources Canada // Nexen Inc. // Ontario Power Generation // Opel Inc. // Packers Plus // Plasco // uOttawa/School of Electrical Engineering and Computer Science // Wenvor Technologies Inc.