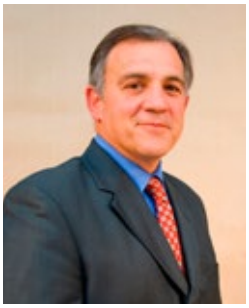
OCTOBER 2013 PROGRESS REPORT

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.

NEW INITIATIVES- SAME PURPOSE



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

It's been a busy year of fascinating activities and exciting partnerships since our last progress report on **Let's Talk Energy!** With new museum and science centre partners joining the initiative from across Canada, and an international partner in Mexico City, **Let's Talk Energy** continues to grow in scope and coverage. This network has grown to reach over **five million visitors** every year.

We're also very excited about the recent opening of our *Green Skies Ahead* exhibition at Montreal's Pierre Elliot Trudeau International Airport. With over 13 million passengers flying through the airport every year, **Let's Talk Energy** is thrilled to bring this fascinating energy story to a larger audience than ever before.

With a growing network of partners and initiatives, the time is right to announce our most ambitious and far-reaching project to date – the first national **Let's Talk Energy Week**, taking place February 21st to 28th, 2014. We will work hard to promote this as a week that includes events, activities and discussions from coast to coast to coast, with the aim of increasing energy awareness across Canada. The Canada Science and Technology Museums Corporation is perfectly positioned to organize this week, as we've had great success in the past as coordinator of National Science and Technology Week, which has grown to include over 250 partners and 750 events across Canada.

These are just a few of the projects and accomplishments highlighted in this progress report. We thank you for your continued interest in energy literacy, and are looking forward to another year of education, engagement and discussion!

CMA RECIPIENT
RÉCIPIENDAIRE AMC

AWARDS/RECOGNITION

Let's Talk Energy strives to be a national leader in the promotion of energy literacy across Canada, and these efforts have not gone unnoticed! In 2012, the Canadian Museums Association presented a special award of Honourable Mention to this unique initiative, and at the international level, the Canada Science and Technology Museums Corporation's former CEO, Denise Amyot, was presented the Roy L. Shafer Leading Edge Award for Leadership in the Field by the Association of Science-Technology Centers (ASTC) for her role in developing **Let's Talk Energy**. In 2013, **Let's Talk Energy** was recognized for two further awards. The 'Prix coup de coeur' for Sustainable Development from the Regroupement des gens d'affaires, and the Leading Management Change Award from Canadian Government Executive Magazine recognized the Canada Science and Technology Museums Corporation's commitment to energy efficient operations and their innovative approaches to building energy literacy.

2012
ROY L. SHAFER
LEADING EDGE AWARD
Recipient
PRIX ROY L. SHAFER
«LEADING EDGE AWARD»
Récipiendaire

CMA RECIPIENT
RÉCIPIENDAIRE AMC

2012
OUTSTANDING
ACHIEVEMENT AWARD
Exhibitions Category (Honourable Mention)
PRIX D'EXCELLENCE
La catégorie «exposition»
(mention honorable)

LE REGROUPEMENT
DES GENS D'AFFAIRES
DE LA CAPITALE NATIONALE

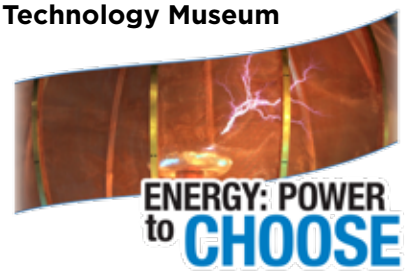
Canadian Government
EXECUTIVE

FASCINATING EXHIBITIONS

Canada Agriculture and Food Museum

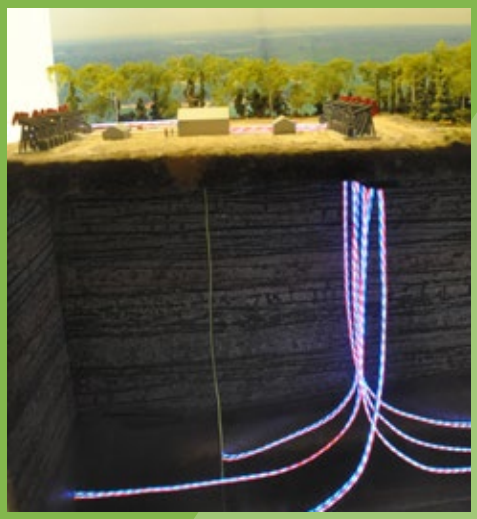
Canada Aviation and Space Museum

Canada Science and Technology Museum



THE THREE EXHIBITIONS

The Canada Agriculture and Food Museum's **Energy Park: Nature at Work** continues to offer 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, continues to take 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**, continues to invite 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. The exhibit was refreshed in 2013 with some exciting additions. Thanks to the generous support of the Imperial Oil Foundation, a new interactive model has been added that depicts the process of in-situ extraction of bitumen from oil sands. The nuclear section of the exhibition has also been refreshed thanks to the generous support of the Canadian Nuclear Safety Commission. New images help explain the role the exhibition's ZEEP nuclear reactor played in spurring research and development in the use of nuclear science to produce both energy and medical isotopes, and a new interactive touch screen has also been added. To learn more, come to the Canada Science and Technology Museum and visit the updated sections.

GREEN SKIES AHEAD AT MONTREAL AIRPORT

In June 2013, the **Let's Talk Energy** Team was pleased to announce the opening of the Green Skies Ahead exhibition at Montreal's Pierre Elliot Trudeau International Airport. The 400-square foot exhibit allows visitors to discover how energy has shaped the design of airports and airplanes in the past, present, and future. With over 13 million passengers flying through the airport every year, **Let's Talk Energy** is thrilled to bring this fascinating content to a larger audience than ever before.

CLEAN CURRENT TIDAL TURBINE

As part of the Pearson College-Encana-SDTC-Clean Current Tidal Power Demonstration Project, this unique turbine, tested in both the Atlantic and Pacific Oceans, is now showcased on the front lawn of the Canada Science and Technology Museum! This type of turbine can produce enough electricity in one year to power ten houses. Electricity is produced by harnessing the power of the tides that pass back and forth through the turbine, turning its blades. Its environmentally-friendly design allows marine life to safely pass through the centre and around the ducts, and the turbine has minimal impact on the surrounding environment.

INFORMATION KIOSKS

Let's Talk Energy information kiosks are being installed in more locations across Canada. These kiosks have been designed to provide an engaging overview of energy in Canada, and to be located in public spaces. The kiosks include the Canada Science and Technology Museums Corporation's own material, as well as content from partners such as Pollution Probe, SEEDS Foundation and the Centre for Energy.

Kiosks are currently in the following locations:

1. Science World British Columbia, Vancouver, British Columbia
2. Dawson Creek Airport, Dawson Creek, British Columbia
3. Alberta Sports Hall of Fame, Red Deer, Alberta
4. Heritage Park, Calgary, Alberta
5. Leduc #1 Energy Discovery Centre, Leduc, Alberta
6. Okanagan Science Centre, Vernon, British Columbia
7. University of Ontario Institute of Technology, Oshawa, Ontario
8. Canada Science and Technology Museum, Ottawa, Ontario
9. Canada Agriculture and Food Museum, Ottawa, Ontario
10. Biosphère, Montréal, Québec
11. École de technologie supérieur, Montréal, Québec
12. Musée du fjord, La Baie, Québec
13. La cité de l'énergie, Shawinigan, Québec
14. Discovery Centre, Halifax, Nova Scotia
15. Museum of Industry, Stellarton, Nova Scotia (touring New Brunswick and Nova Scotia)
16. Eptek, Summerside, PEI
17. Johnson GEO Centre, St. John's, Newfoundland & Labrador

WATT'S UP? — A POPULAR TRAVELLING EXHIBITION

Watt's Up? Renewable Energy was on display from March to June, 2013 at the Woodstock Museum National Historic Site in Woodstock, Ontario, and will be featured at its first international location, at the Cité des Télécoms in France from January to December, 2014.

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 was developed in conjunction with the Saskatchewan Science Centre in Regina, THEMUSEUM in Kitchener, Ontario, and the Sherbrooke Museum of Nature and Science in Quebec. For information on Watt's Up, please visit: **www.naturesciences.qc.ca/en/event/watts-up-renewable-energy-2/**.

ENERGY IN FOCUS

ENGAGING PROGRAMMING

At the Canada Agriculture and Food Museum, more than 2400 adults and children participated in **Harvesting Energy**, the Museum's annual Thanksgiving event in 2012. While visitors discovered foods harvested in the fall, they also explored how farms produce energy from sources such as the sun, wind, and crops. Through our new biofuel garden tour, visitors were able to learn more about switch grass, camelina and miscanthus, to name a few, and discover the various products provided to us by these versatile plants.

The outdoor exhibit **Energy Park: Nature at Work** was also the setting for several energy related demonstrations throughout the year. From April to August 2013, over 500 visitors took part in fascinating demonstrations on wind energy and biofuels.

Throughout the year, energy took centre stage at the Canada Science and Technology Museum. The **Energy Cart** has quickly become the museum's most popular demonstration. Visitors can examine the viscosity of different forms of oil; play with Eddy currents, the principle of which is used in some wind turbines; and examine the density of sulphur hexafluoride compared to regular air. In 2012-13, it was seen by almost 9000 visitors, making it roughly twice as popular as any other demonstration.

Energy-themed **school programs** at the Canada Science and Technology Museum are also very popular, with thousands of students from grades 1 to 9 taking part in over 90 programs related to Energy in the 2012-2013 school year.

This July, the Canada Science and Technology Museum also celebrated **Energy Days** on July 20th and 21st, with many activities for the whole family, including a squishy circuit workshop, energy demonstrations, a giant floor game and a scavenger hunt. Visitors were invited to take part in activities with the Ottawa University Engineering Department, Canadian Geographic Education and Hydro-Ottawa. The event attracted 1895 visitors over the weekend.

The Canada Science and Technology Museum also organized another energy-related 'Café Scientifique' discussion this year on Canada's natural resources in the Arctic. Those interested in sustainable development and resource extraction were invited to partake in lively discussions and a game of Arctic trivia.

In addition to energy-related museum programming, **Let's Talk Energy** teamed up with museums, science centres, universities and local interest groups for screenings of 'Switch', a feature length documentary film that explores current and future sources of energy, and our transition to a more sustainable energy future. In the past year, more than 1600 people have attended screenings and participated in engaging discussions across Canada.

SPECIAL PROJECTS:

Summer Institute for Elementary Teachers 2013

For the third 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. This summer, 37 teachers from across Canada went on a field trip to the Rapides-Farmer Generating Station in Gatineau, Quebec. Teachers were led by Hydro Québec tour guides through an interpretation centre and through the generating station itself. Teachers explored how electricity is created in a hydroelectric station and how it is distributed to surrounding communities. Teachers also received a copy of 'Electricity: from the power station to the home' a document that summarizes the information presented during the field trip and includes classroom resources.

Electric Vehicle Charging Station

Last October, the Canada Science and Technology Museum received an energizing addition, with the installation of an electric vehicle (EV) charging station. This new, state of the art charger was donated by Sun Country Highway Ltd, a Canadian company dedicated to creating a network of free EV chargers across Canada. The installation of the charger was sponsored by the Electric Vehicle Council of Ottawa (EVCO).
www.suncountryhighway.ca

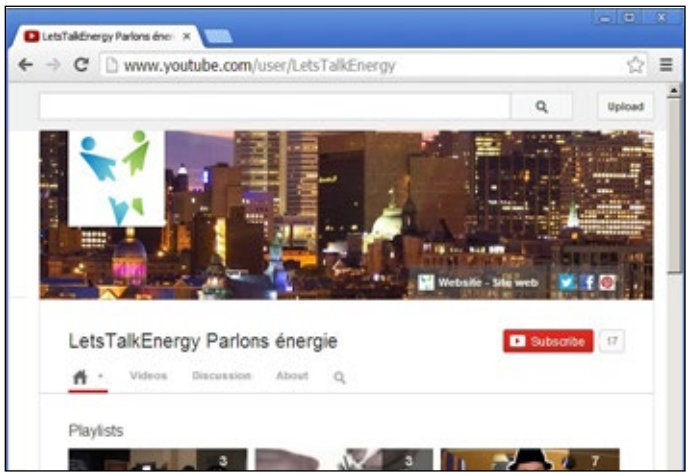
VIRTUAL TOOLS:

Social Media

Let's Talk Energy's virtual outreach continued to be a priority of the initiative this past year. With growing numbers of followers across social media, more engaging and informative content is being shared with an ever broadening audience. With educational videos on YouTube, the latest news on Twitter, visually engaging content on Pinterest, and fun Facebook posts, **Let's Talk Energy** continues to initiate and fuel the conversation. The initiative is also continuing to promote use of the hashtag #talkenergy - tweets containing this hashtag appear live on the wall of the Canada Science and Technology Museum in the Energy: Power to Choose exhibition (@enertweets).

New Website

This year **Let's Talk Energy's** website has a fresh look! The new interface enables users to easily explore all aspects of the initiative – including links to partners and sponsors - and to learn more about energy in Canada. It includes sections devoted to explaining sources, distribution and consumption drawn from exhibitions and from partners' materials; as well as the Explore Energy map of Canada, populated by users to highlight energy sites of interest across the country. See it for yourself at **www.letstalkenergy.ca**.



Blogs

An exciting addition to the new website is the launch of two new blogs! The first, **Energy Tech Talk**, is produced in partnership with Sustainable Development Technology Canada (SDTC) and features articles on the new and innovative Canadian energy technologies. The second, **Energy Perspectives**, is a platform for voices from across the country to share their unique insights on the importance and relevance of energy to Canadians.

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 29 partners representing 28 locations across Canada.

- Biosphère, Environment Museum
  Montreal, Quebec
- Canada Agriculture and Food 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
- Heritage Park Historical Village
  Calgary, Alberta
- Interactive Museum of Economics
  Mexico City, Mexico
- 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
- Montreal Science Centre
  Montreal, Quebec
- North Cape Wind Energy Interpretive Centre
  North Cape, Prince Edward Island
- 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

UNIQUE PARTNERSHIPS

New MAPP Partners

Let's Talk Energy was pleased to welcome two new Canadian MAPP Partners in 2013. Both the North Cape Wind Energy Interpretive Centre in Tignish, Prince Edward Island and the Montreal Science Centre are now a part of our network. The North Cape Wind Energy Interpretive Centre offers countless opportunities for hands-on and visual learning about the importance of wind energy and the means to harness this renewable resource, and the Montreal Science Centre's amazing, fun, and surprising exhibitions allow visitors to explore, learn, and understand through a variety of interactive means. Welcome to the network!
www.northcape.ca/north-cape-wind-energy-interpretive-centre
www.montrealsciencecentre.com

New International MAPP Partner

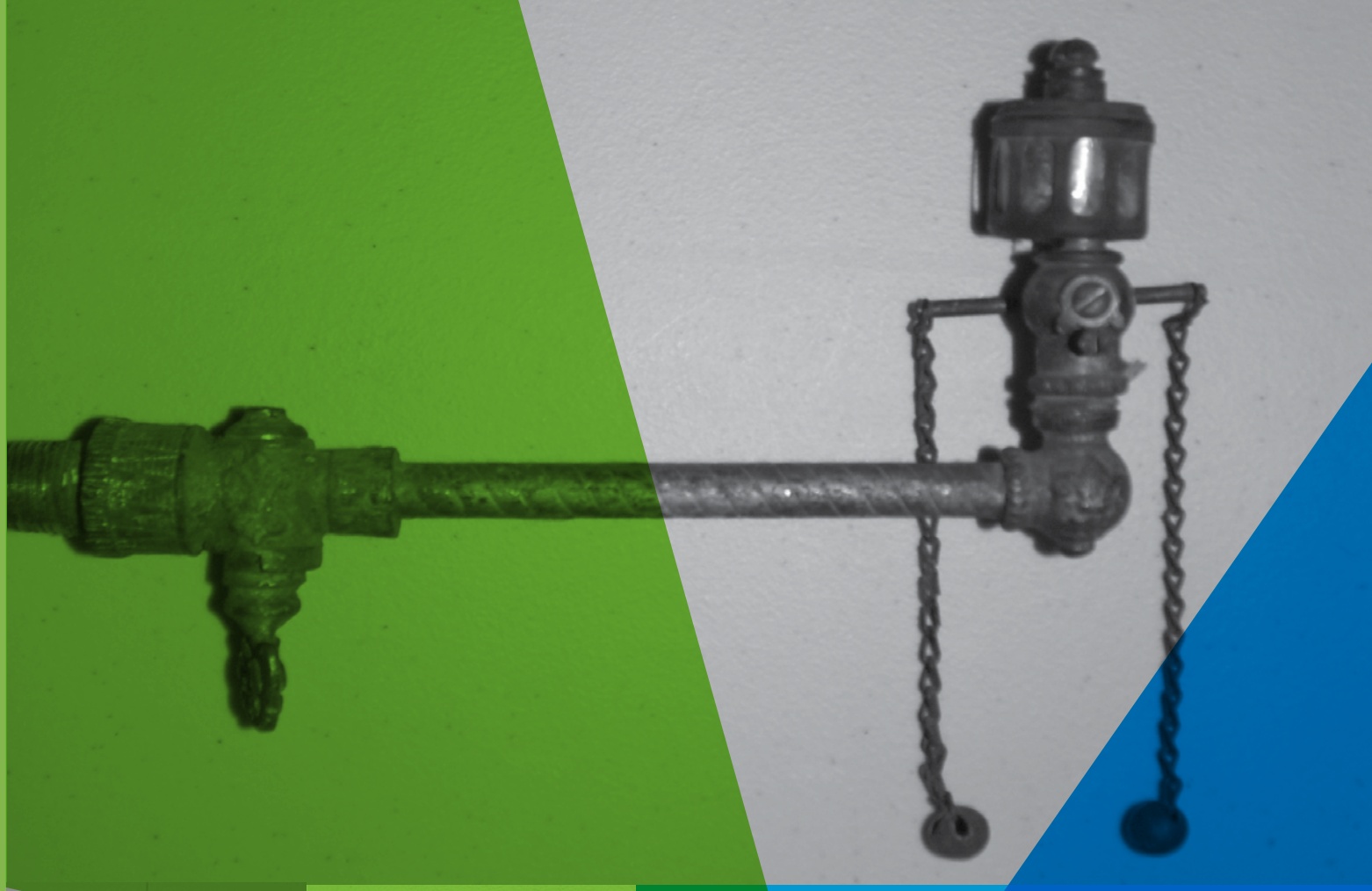
Let's Talk Energy also welcomed its first international partner in 2013! The Interactive Museum of the Economy (MIDE) in Mexico City is the only museum in the world devoted to the economy, finance and sustainable development. For more information, please visit: **www.wikipedia.org/wiki/Interactive_Museum_of_Economics**

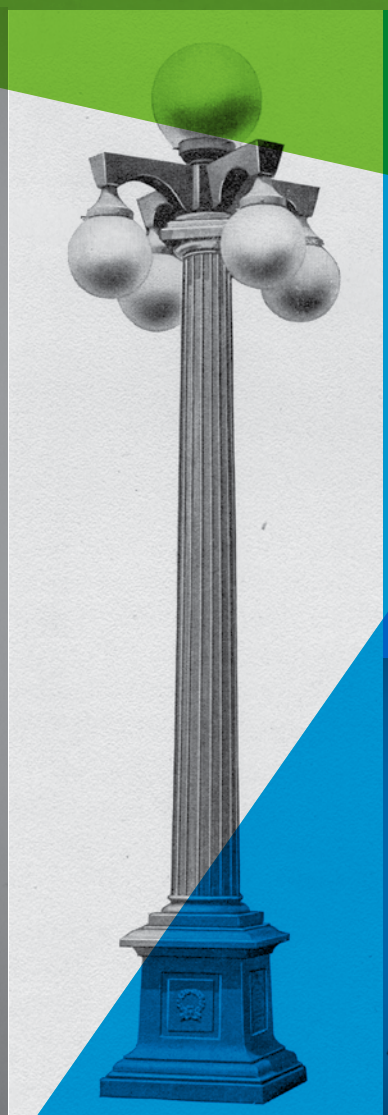
LET'S TALK ENERGY Newsletters Featured MAPP Partner Achievements:

Canadian Nuclear Safety Commission
In an effort to provide Canadian youth with a better understanding of how the nuclear sector works in Canada and how it is kept safe, the Canadian Nuclear Safety Commission (CNSC) released a short video that looks at the nuclear fuel lifecycle in Canada. The video is geared towards students in grades 7-12. In the video, a narrator talks about how nuclear fuel is created and managed, and an artist draws supporting illustrations. The video, posted on the CNSC YouTube page, can be used for classroom presentations, and is offered for use to museums and science centres across the country.
www.youtube.com/user/cnscccsn

The Latest News from MAPP Partners

Nova Scotia Museum of Industry
At the Museum of Industry in Stellarton, Nova Scotia, the historical uses of energy figure prominently in the 40,000 square foot permanent exhibition. In this loose chronology of how Nova Scotia changed as a result of industrialization, three periods are represented focusing on the predominant source of energy powering the industrial activity of the time. Early industry depended on falling water to drive the machinery in the mills and factories built along the province's many rivers. Later, steam power freed industry to locate away from rivers and closer to raw materials and markets. In the 1900s, electric power became the dominant source of energy for industry and home life. Museum visitors explore these energy sources through hands-on opportunities to feel the power of water, demonstrations of the transference of energy from steam to machines, and interactives explaining the impact of electricity on labour at work and at home.
www.museumofindustry.novascotia.ca

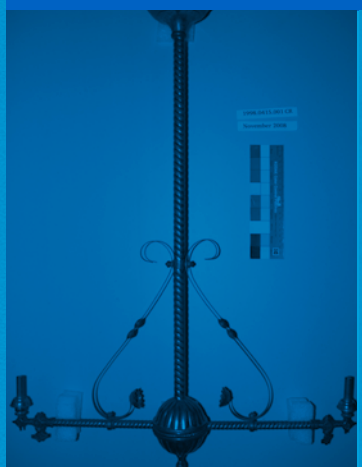


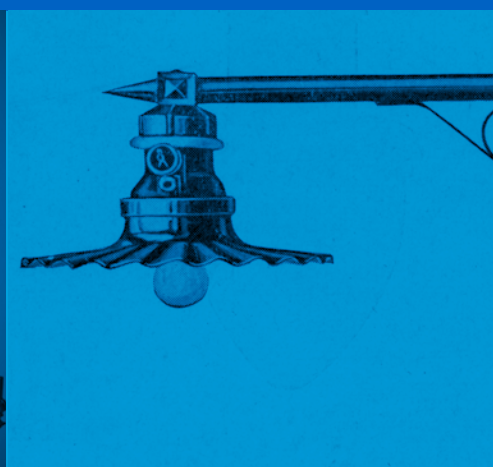


THE COLLECTION

Spotlight on Lighting:

The Canada Science and Technology Museums Corporation's lighting collection contains over 2000 artifacts dating back to 1835. Illumination has always been about more than technology. Lamps, both gas and electric, convey a sense of prestige, wealth, and class aspirations. These qualities were reinforced by the design and ornamentation of early fixtures. Initiated in 1968, the museum lighting collection brings together gas, arc, incandescent, and fluorescent lamps, light standards, and trade literature that represent technological developments and reflect the aesthetic trends of the late nineteenth and early twentieth century, among them the Victorian style, "City Beautiful" movement, Art Deco, and modernism.





MORE PROJECTS ON THE WORKBENCH!

The following Let's Talk Energy projects are already underway:

• Let's Talk Energy Week- It's On!
From February 21st to 28th, 2014, Canadians will be invited to explore and discuss how energy is connected to their lives, and the importance of energy systems and their elements to our economic, social and environmental future. They will be encouraged to organize activities and events in their communities and to engage with others on energy-related issues during the week.

• Biodigester at the Canada Agriculture and Food Museum
A demonstration biodigester has been provided by the Saskatchewan Research Council and the Canadian Gas Association for integration into the Museum's energy-themed educational offerings. A biodigester uses micro-organisms to produce methane gas from biodegradable material, including farm wastes. Once installed, the Museum's demonstration biodigester will primarily use manure from its herds.

• Energy Literacy Community of Practice Network
With generous support from the Suncor Foundation, **Let's Talk Energy** will be working to create a national network of energy literacy practitioners in order to increase the impact of everyone's efforts. Information about organizations with educational material related to energy, delivering energy programming, and promoting energy literacy will be gathered and shared in order to promote partnerships and synergies.

The following museum/science centre partners' projects are underway:

• Fuelled by Innovation at the Western Development Museum
The Western Development Museum (WDM) looks forward to presenting **Fuelled by Innovation**, an exhibit featuring alternative fuel vehicles, past and present, from the Museum's collection. The official opening will take place at the Saskatoon WDM in early January, 2014. Among the gems from the WDM collection to be showcased are a 1911 Rauch & Lang electric coupe, a representation of a straw gas-powered car developed at the University of Saskatchewan in 1918, a 1926 Brooks steam car made in Stratford, Ontario, a 1970s wind-powered vehicle built by a Saskatchewan farm boy on a VW Beetle chassis, an early 1980s steam-powered bike ridden on the streets of Saskatoon, a 1982 experimental ElecTrek car tested by Saskatchewan Power Corporation, and a competition-winning supermileage vehicle built by University of Saskatchewan engineering students in 1982. Newest in the line-up is the successful 2010 Gofer Electric Vehicle, designed and built in Saskatoon by PapaBravo Innovations for use in underground mines.

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