



CANADIAN

Energy Efficiency Alliance

Priorities for Energy Efficiency Market Development

*Canadian Energy Efficiency Alliance's National
Advocacy Plan*

WHITE PAPER

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Letter from the Canadian Energy Efficiency Alliance (CEEA) Board Chair, Tracy Lynch and CEO, Elizabeth McDonald

Dear Members and Friends of CEEA,

In August of 2012, the Board of Directors engaged a new CEO, Elizabeth McDonald, and together we committed to revitalizing CEEA. As a first step towards renewal, we began a strategic planning exercise to plot out our activities for the fiscal years 2012/2013 and 2013/2014.

As part of this process, we have reviewed and revised CEEA's objectives. We believe CEEA must:

- ❖ Play a leading role in supporting governments and other stakeholders in Canada in developing and implementing energy efficiency policies, programs, codes and standards
- ❖ Provide a value proposition for energy efficiency to be an important priority for all sectors of the Canadian economy that will create hundreds of thousands of jobs across many communities¹
- ❖ Support our members in the development, promotion, education and delivery of their energy efficient products and services
- ❖ Provide stakeholders with valuable research on issues that affect the promotion and advancement of energy efficiency
- ❖ Operate a well-governed, financially-sustainable organization

We conducted an environmental scan and identified the challenges in Canada to advancing energy efficiency as:

- ❖ *The current economic environment.* All levels of government in Canada face budgetary pressures and have limited resources for new programs
- ❖ *The global call to reduce Greenhouse Gas (GHG) emissions is no longer on the global agenda.* The Kyoto Accord, a former driver of energy efficiency, is unfulfilled and nothing has replaced it, however in recent months the Obama Administration and Senator Mark Warner have strengthened their position on energy efficiency
- ❖ *Increased supply of natural gas from North American shale gas deposits is lowering the cost of natural gas.* This has made energy efficiency less attractive to consumers and industry
- ❖ *The electricity supply surplus in many jurisdictions (such as B.C.) has made Demand Side Management (DMS) a greater challenge*
- ❖ *The "low hanging fruit" (ex. recycling, programmable thermostats) are the most easy to implement, offering the fastest returns on investment.* The longer payback investments can be more difficult to justify from a capital expenditure perspective

¹ From work done by the Pacific Coast Collaborative www.pacificcoastcollaborative.org/Pages/ThirdAnnualLeadersForum.aspx

Our environmental scan also identified positive trends that will enable further gains in energy efficiency. The primary trends and issues facing CEEA in the immediate future are:

- ❖ *Research confirming the economic, environmental and job creation potential of energy efficiency is mounting, building the value proposition for energy efficiency within policy discussions²*
- ❖ *All levels of government³ are expressing their interest in energy efficiency.* While budget constraints inhibit the development of new programs, they also incentivize governments to pursue and encourage conservation and energy efficiency. Examples include:
 - Senate Standing Committee on Energy, Environment and Natural Resources in its July 2012 report, *Now or Never* ranked the encouragement of energy efficiency and conservation at the consumer level as its fourth priority
 - Energy and Mines Ministers' Conference report released September 2012 called for a multi-jurisdictional approach to energy efficiency
 - Conservation is a key component of Ontario's Long Term Energy Plan, which calls for 7,100 MW of demand reduction through conservation by 2030
 - Electricity and gas companies across Canada have invested in DSM programs
 - Energy efficiency is important to the Government of Canada; over \$1.5 billion invested from 2007-2016 to improve the efficiency of the economy through codes, standards, programs and research & development.
- ❖ *Building codes are becoming more stringent.*
 - 2011 National Energy Code for Buildings is 25% more stringent than its 1997 predecessor.⁴ It includes energy efficiency requirements for Institutional, Commercial and Industrial buildings (ICI). Section 9.36 of the National Building Code pertains to energy efficiency.
 - A supplement to the Ontario Building Code on energy efficiency requirements for large buildings, SB-10, exceeds ASHRAE 2010 by 5%.
- ❖ *The ISO 50001 Standard is being implemented worldwide.* Canada was the first country to adopt this code as its national standard in 2011. The certification provides a framework for organizations to manage energy use. It aligns with utility requirements for demand side management and could open doors for collaboration between industry and utilities in support of energy efficiency.
- ❖ *International Energy Agency reports have ranked Canada well against its OECD peers.* Canada was ranked 5th in a 2011 review of 28 countries for its level of implementation of a broad spectrum of 25 best practice policy recommendations.⁵ In another report, the IEA ranked Canada second only to Germany in its rate of energy efficiency improvement among 16 countries over the 1990-2008.⁶

² Examples: *Unlocking Energy Efficiency in the US Economy* from McKinsey & Company; *The \$20 Billion Bonanza: Best Practice Electric Utility Energy Efficiency Programs and Their Benefit for the Southwest* by Southwest Energy Efficiency Project.

³ "All levels of government" includes federal, provincial, territorial, municipal and First Nations

⁴ National Energy Code Buildings 2011 – Presentations www.nationalcodes.nrc.gc.ca/eng/presentations/2011_necb_presentations.html

⁵ International Energy Agency, *Insights Series 2012*, "Progress Implementing the IEA 25 Energy Efficiency Policy Recommendations: 2011 Review"

⁶ International Energy Agency, *Scoreboard 2011*, "Implementing Energy Efficiency Policy: Progress and Challenges for IEA Member Countries" 2011



Other organizations engage in aspects of energy efficiency but CEEA is the only national organization solely dedicated to the advancement of energy efficiency and conservation in Canada. CEEA has undertaken a number of public and proactive initiatives, including:

- ❖ Partnering with Scotiabank for *Eco-Living Community Challenge*. Rolled out spring/summer 2013 it encourages consumers and municipalities to compete to adopt more energy efficiency practices.
- ❖ Engaging the Gandalf Group to conduct consumer research on Canadian attitudes towards energy efficiency, to guide the development of our initiatives, advocacy and messaging.
- ❖ Hosting the inaugural Thought Leaders Forum in April 2013, which brought energy efficiency leaders from Canada and around the world to discuss where CEEA's voice is needed.

This White Paper reflects the direction that our members have given us. It lays out their priorities, the best practices they want us to advance, the initiatives they want us to undertake and the solutions they want us to advocate. This White Paper is only the beginning and we will continue to reach out to all of you as we move forward. As a national, member-driven organization, CEEA is committed to supporting members and responding to their needs, and is reliant upon the enthusiastic and committed participation of our membership base. We are confident that, together, CEEA and our members will have a bright future.

Sincerely,

Tracy Lynch
CEEA Board Chair

Elizabeth McDonald
CEEA, CEO

About the Canadian Energy Efficiency Alliance (CEEA)

Mission

CEEA is an independent advocate for energy efficiency in Canada. We work with governments and stakeholders to ensure energy efficiency is a priority for all sectors of the economy. We are an effective voice and resource for policy makers, businesses, builders, consumers, energy companies and environmental groups

What We Do

- Provide independent research on energy efficiency issues and advancement
- Create networking opportunities for members and stakeholders
- Support and advocate for effective energy efficiency policies, programs, codes and standards
- Help members develop, promote and deliver energy efficient products and services
- Raise awareness about energy efficiency across all sectors of the Canadian economy

Our Stakeholders

Manufacturers, utilities, governments, builders, professional, labour and consumer groups, and environmental organizations are all part of the CEEA network.

Our History

CEEA was established in 1995 to increase competitiveness and environmental protections and improve how stakeholders collaborated to promote energy efficiency in Canada.

Our Board of Directors

Tracy Lynch, Union Gas (*Board Chair*)
Giuliana Rossini, Hydro One (*Board Secretary*)
Rebecca Isowa, Seneca College (*Director*)
Gary Johnson, Seneca College (*Director*)
Christine Mclean, Enbridge Gas Distribution (*Director*)
Corey McBurney, EnerQuality (*Director*)

Andrew Pape-Salmon, RDH Building Engineering (*Board Vice Chair*)
Jay Nordenstrom, NAIMA Canada (*Treasurer*)
Sam Loggia, Canadian Standards Association (*Director*)
Martin Luymes, Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) (*Director*)
Elizabeth McDonald, CEEA (*Director; ex-officio*)

INTRODUCTION

In 2013 CEEA initiated some new activities to inform and drive an advocacy and market development strategy. A national opinion survey was conducted to gauge Canadian attitudes towards energy efficiency, and a conference brought stakeholders and experts together to discuss, share and recommend proposals and best practices that CEEA could champion to government, consumers and industry.

National Opinion Survey

In winter 2013, CEEA engaged The Gandalf Group to conduct a national opinion survey. An online survey of 1,584 Canadians was conducted from February 13- 16, 2013.

The Energy Efficiency Thought Leaders Forum

On April 12, 2013 CEEA brought together energy efficiency stakeholders and experts from government, businesses, utilities, consumer and environmental groups. Presenters included:

- The Gandalf Group – presenting polling data
- Carol Buckley, Director General, Office of Energy Efficiency, Natural Resources Canada
- Hon. Tom Roper, President Australian Sustainable Built Environment Council was the Keynote speaker, his presentation titled *Energy Efficiency – An Urgent Issue*

In the afternoon, attendees participated in two of five breakout sessions on the following topics: The Role of All Levels of Government; Communicating the Energy Efficiency Message; Transportation and Energy Efficiency; Training and Education for Energy Efficiency; and The Built Environment.

Input and direction from members and stakeholders derived from these sessions was critical to the development of this White Paper. CEEA is a national, member driven organization; this paper lays out the initiatives that CEEA's members would like CEEA to spur and the best practices CEEA is to advance in the short and long term.

ENERGY EFFICIENCY AND CANADIANS – insights from the national opinion survey⁷

The Gandalf survey found that most Canadians (75%) believe energy conservation is very important and many have taken steps to conserve energy (37% have done “a great deal”, only 17% have done “little to nothing”). The steps Canadians are taking include installing new light bulbs, investing in energy efficient appliances, upgrading doors/windows/weather-stripping, turning the heat down when away and/or at night, and washing laundry in cold water. Conserving energy appeals to all Canadians, and a majority of Canadians intend to do more. There is no specific target audience – more than half of any demographic group, regardless of region, age, gender or income is trying to conserve now yet intends to do more.

Canadians know they can do more and intend to do more to conserve energy. A greater number of Canadians believe that conservation efforts will deliver cost savings and benefit the environment than are actually working hard to conserve energy. Hence the Canadian public is a ripe target audience for energy efficiency messages.

⁷ Access the full survey results: <http://energyefficiency.org/wp-content/uploads/2013/04/CEEA-Survey-Gandal-2013-4-12.pdf>
Access the Executive Summary <http://energyefficiency.org/resources/reports/opinion-research-executive-summary-april-2013/>

The Gandalf Group's analysis identified three factors associated with increased conservation:

- ❖ *Canadians want to save money*
- ❖ *Canadians are willing to do something for the environment*
- ❖ *Canadians need more information and knowledge about how to conserve*

Savings and environmental protection provide motivation, while knowledge equips Canadians with the ability to conserve. The survey found that knowledgeable respondents conserved the most, thus CEEA needs to provide information to Canadians as to how they practice conservation and can access programs that assist with costs. No matter how much or how little conservation a Canadian is currently practicing, they can do more at no monetary cost; thus, Canadians need environmental motivations in addition to cost. Whether promoting behavioural changes, programs or investments, CEEA must explain why this is good for the environment, how money will be saved, and how to do it. You can go to the public with just one of these messages, but you'll be two to three times as effective in increasing the likelihood that someone will conserve if you leverage all three.

Additional Survey Highlights:

- ❖ Shorter payback periods on energy savings investments are more attractive to Canadians (66% of home owners and buyers reported interest in a \$1,000 energy retrofit that would be paid back in 2 years; when the payback was 5 years, only 22% were interested)
- ❖ 1 in 4 Canadians strongly agree they know a lot about how to conserve energy in their daily life
- ❖ Canadians strongly support subsidies for energy retrofits and renovations of \$1,000 and over
- ❖ Canadians strongly support mandating energy efficiencies in new construction
- ❖ More than 40% of Canadians strongly support and three quarters at least somewhat support requiring more fuel efficient cars (even if it increases the price of those vehicles)

HON. TOM ROPER'S PRESENTATION: ENERGY EFFICIENCY – AN URGENT ISSUE⁸

Tom Roper, President Australian Sustainable Built Environment Council, provided the keynote address at the Thought Leaders Forum. His presentation, *Energy Efficiency – An Urgent Issue*, advocated the importance of the built environment to energy efficiency, the need for a comprehensive approach to energy efficiency and urged for planning and design for the future to address climate change challenges.

Mr. Roper argued that the building sector, accounting for 30-40% of global energy, offers the largest potential for low cost reduction.⁹ According to the Global Buildings Performance Network, the building sector could decrease energy use for heating and cooling by more than 40% despite a 100% increase in floor space by 2050. He explored tools and incentives to improve energy efficiency, highlighting success with case studies. He stressed the need to transform the planning and building process so that it accounts for the impacts of climate change, (ex. contingency planning, taking predicted climates into account at the design stage).

In closing, he argued that while we can no longer afford business as usual, there is no reason for panic or complacency. The built environment offers the quickest and largest cut to CO₂ and major economic

⁸ Access presentation: <http://energyefficiency.org/wp-content/uploads/2013/03/Tom-Roper-Speech-CEEA-2013.pdf>

⁹ Slide number 4 of Hon. Roper's presentation, referenced the IPCC Working Group III – Buildings, pg 11

benefits. He expressed the need to design and build for future climates and retrofit what we have, and develop strategies to build resilience to manage current variability and to manage future uncertainties.

CEEA: PLAN FOR ADVANCING ENERGY EFFICIENCY

The initiatives, activities and programs that CEEA will pursue over the next 12-24 months reflect the direction that our members have given us and seek to address their priorities. CEEA has selected five areas of focus, which are:

- ❖ The Role of All Levels of Government
- ❖ Communicating the Energy Efficiency Message
- ❖ Transportation and Energy Efficiency
- ❖ Training and Education for Energy Efficiency
- ❖ The Built Environment

In recent years, energy efficiency has been most frequently talked about in terms of saving electricity. But it is much more than that. Oil and gas sectors, transportation, homebuilding and others are major parts of our economy where greater efficiency, less GHG emissions and less use of resources can have a major impact on our long-term well-being. Our initiatives and our efforts are focused on this broader definition of energy efficiency.

Member support and the availability of resources were important considerations for the Board when developing these initiatives. The initiatives that CEEA will focus on are outlined in the following section.

As a link between government, industry and consumers, one overarching role that CEEA will strive to take on is to become a provider and disseminator of relevant, thoughtful and timely information about energy efficiency. This need exists to varying degrees in all of the sectors that CEEA's members represent. CEEA looks forward to furthering its presence and activities here, in service to our members.

1. THE ROLE OF ALL LEVELS OF GOVERNMENT

"The role of government is to behave appropriately against the background of compelling circumstances. The role of the private sector is to convince the government of the compelling nature of circumstances."

Len Farber, Norton Rose

Governments have a number of tools at their disposal to facilitate the adoption of energy efficiency-related behavioural changes and investments. CEEA is committed to working with government partners as they seek to provide leadership to constituents through education, setting goals and championing activities. Governments must set goals and directions without picking winners or losers. To this end, when working with governments CEEA should steer and reinforce the role of government(s) to: set objectives and outcomes and seek achievement of the "Five 'A's of Market Transformation".¹⁰

¹⁰ ENERGY STAR® Market Transformation Awards used the "Five A's" of Market Transformation to assess nominations. They are: availability, awareness, accessibility, affordability and acceptability. <http://oee.nrcan.gc.ca/equipment/manufacturers/700>

Canadian Cities: Energy Efficiency Leaders

- Vancouver is implementing its Greenest City 2020 Action Plan.
- The Toronto Atmospheric Fund, operating as an arms-length agency the City, assists the City of Toronto with achieving targets set out in the City's climate plan and supports energy cost savings through energy efficiency.

All levels of government - federal, provincial, and municipal – have roles to play and responsibilities to fulfill regarding energy efficiency. CEEA will engage with these different levels of government. CEEA will also provide a forum for collaboration with government and among governments.

Example: Pacific Coast Collaborative

In 2012 the members of the Pacific Coast Collaborative, B.C., California, Oregon and Washington, launched the

2012 West Coast Action Plan on Jobs to grow the clean economy along the West Coast to create a million new jobs by 2020.¹¹ The plan outlines commitments by each jurisdiction for retrofitting state-owned buildings, fleet purchasing of advanced technology vehicles, and creating world-class energy standards to incentivize private sector leadership and advanced manufacturing. For example, members committed to implementing strategies to move public building stock toward net-zero energy building performance, starting with a commitment to improve energy use by at least 20 % by 2020.

Initiatives for CEEA:

- ❖ CEEA will engage with government(s) to help them develop and promote a vision for energy efficiency.
- ❖ CEEA will seek opportunities to partner with all levels of government to disseminate information on energy efficiency initiatives, service providers, databases, policies, regulations and programs. By seeking out such opportunities, CEEA could become a one-stop shop with information on opportunities for industry, hosting key information on a centralized, up-to-date and reliable website. CEEA acknowledges this will be a challenge but the need for this service is real.
- ❖ CEEA will pursue collaboration with Canada's financial institutions to develop and promote green mortgages and green insurance policies.
- ❖ CEEA will spur a project to identify a feasible, revenue-neutral tax mechanism for energy efficiency that stakeholders would support and could be adopted by the federal and provincial governments.
- ❖ CEEA will facilitate growth of the energy efficiency goods and services market and sector through local economic development activities – identify energy efficiency as an economic cluster and priority as the Pacific Coast Collaborative has done.

2. COMMUNICATING THE ENERGY EFFICIENCY MESSAGE

As discovered through the national opinion survey, three factors need to be addressed when communicating energy efficiency messages to Canadians: cost savings, benefit to the environment, and detailed information on how to conserve. At the Thought Leaders Forum, participants were informed that communicators must also overcome two additional challenges: attracting and holding the

¹¹http://www.pacificcoastcollaborative.org/Documents/Reports%20and%20Action%20Items/WestCoast_ActionPlanonJobs_MOU_WEB.pdf

consumer's attention, and speaking about energy efficiency in a language the audience can understand. The message must be interesting enough to hold the audience's attention, clear and relevant so that they understand, it must appeal to both cost savings and the environmental motivations and it should provide them with 'how to' knowledge. This is a tall order!

Canadians need information packaged in ways that catch their eye and are relevant to them and the things they are already doing (e.g. life events such as buying a home). While the survey results found that Canadians of all demographic groups are almost equally trying to conserve and intend to do more, different tactics, messages and media need to be employed to communicate effectively with different demographic groups. The message also needs to be persistent to increase the chance that consumers receive the message at a time when they are open to it. Connections should be made between saving energy, saving money and the environment. Promotional tools, such as games or competitions, should always explain why the behaviour being encouraged is desirable, to increase the likelihood of a real behavioural change.

Messaging should provide consumers with information they can apply – more than numbers, they need information that explains how, and how much, energy they wasted yesterday and what they could do to save today. Energy Management Information Systems (EMIS) provide insights to home owners about their energy usage relative to other similar homes in their neighbourhood and couples these insights with simple tips to help home owners reduce their energy usage. Insights, coupled with 'how to' information, will enable consumers to make behavioural changes that deliver cost savings to them. Many Canadians look to local utilities to provide them with trusted information.

Initiatives for CEEA:

- ❖ CEEA will continue to promote energy efficiency and disseminate knowledge about new initiatives and technology through CEEA's website (<http://energyefficiency.org/>) and via social media. CEEA will continue to build up its website and social media presence, including its:
 - Big Idea Forum: LinkedIn Discussion Group
 - CEEA's Efficiency Matters Blog
 - Twitter account (@CdnEnergyEffic)

3. TRANSPORTATION AND ENERGY EFFICIENCY

CEEA, supported by the results of the national opinion survey, has identified the transportation sector as a sector within which it would like to build a stronger presence and would like to explore opportunities to bring interested parties together to develop a strategy to overcome known challenges and achieve substantial energy efficiency gains. The transportation sector continues to be a significant contributor to greenhouse gases (GHG) and, while energy efficient technologies and products are entering the market, consumer aversion to high upfront costs continues to impede the adoption of energy efficiency technologies in this sector. Consumers need to value the long term benefits of energy efficiency into the relatively high upfront product cost. CEEA believes that greater industry, and cross industry, collaboration is important to addressing these challenges.

Demand Side Management programs championed by electric utilities and natural gas companies have been highly instrumental in advancing energy efficiency of residential and ICI buildings. In the

transportation sector, there does not appear to be a similar policy provision, or champion. CEEA would like to see a similar ‘DSM for transportation’, which would strive to incentivize and facilitate Canadians to adopt more efficient behaviours and technologies.

Example: United Parcel Service (UPS)

UPS provides its customers with a carbon neutral shipping option by purchasing certified carbon (CO₂) offsets so that customers can choose to offset the emissions produce by transporting their shipments. This service is available to customers shipping from 36 countries.

Initiatives for CEEA:

- ❖ CEEA will work to build up its membership within the transportation sector, to bring interested parties together and develop a strategy for CEEA to advance on behalf of the sector.
- ❖ CEEA will play an active role in hosting and disseminating information on government and industry initiatives in transportation energy efficiency.
- ❖ CEEA to publicize best practices of government policies and programs that promote alternative fuel vehicles, such as B.C.’s *Clean Energy Act*, GHG reduction measures (fuel switching to natural gas vehicles), Low-Carbon Fuel Standard (including offsets for low-carbon fuels), fuelling stations and LiveSmart BC Clean Energy Vehicle Program.
- ❖ CEEA to work with members, to start the discussion of what ‘demand side management for transportation’ initiatives would look like, and what the role(s) for government would be.

4. TRAINING AND EDUCATION FOR ENERGY EFFICIENCY

The industry needs to attract students to fill current and projected labour shortages. University, college and industry driven programs exist – the challenge is attracting students and new practitioners. Many of the careers in the industry are traditionally seen as “blue collar” careers, and need to be rebranded as “green collar” to attract more people. Upgrading the skills of existing workers in all sectors is also critical. 23,000 representatives of Industrial, Commercial and Institutional organizations have enrolled in Natural Resources Canada’s Office of Energy Efficiency’s *Dollars to Sense Energy Management Workshops* since 1997.

Individuals in building operations and building maintenance are responsible for real achievements in a building’s energy efficiency; a building may be designed and constructed to the highest standard in energy efficiency, but its energy performance depends upon the design and installation norms used by the installer, and the abilities and efforts of the building operations and management. Expansion of trades training is needed to ensure service technicians are adhering to energy efficient standards. Incentives can be provided, such as British Columbia’s on-bill financing regulations that require certified professionals for their pilot programs.¹²

Example: Ontario Power Authority (OPA) saveONenergy Training and Support Initiatives

Training is necessary to ensure energy efficiency opportunities are maximized. The OPA’s saveONenergy training and support initiatives provide up to date training to professionals. Programs include: HVAC Installation Optimization, a mandatory one-day training course for HVAC contractors delivered by the

¹² <http://www.newsroom.gov.bc.ca/2013/04/on-bill-financing-pilots-to-be-expanded-next-year.html>

Heating Refrigeration and Air Conditioning Institute of Canada (HRAI) on behalf of the OPA; Home Builder Training Incentive; Building Operator Training Incentive; Commissioning Agent Certification Incentive; Certified Measurement and Verification Professional Certification Incentive; Energy Manager Training Incentive.¹³

Example: Immigrant Pathways to Green Careers, Seneca College

Run at Seneca College with funding from both the Canadian and Ontario governments, the program assists internationally trained individuals with backgrounds in engineering and the natural sciences with finding jobs in the green energy or environmental sectors. Participants benefit from experiential learning opportunities, participating in green building projects, case studies and workplace tours. Participants are able to access College supports and services including employment counseling and job development activities. Upon completion, participants receive a Ministry approved Graduate Certificate in Energy Management, Environmental Project Management, or Environmental Urban Land Regeneration.

Example: The Green Renovator Project™

EnerQuality, in partnership with the BILD, OHBA, the OPA, Enbridge Gas Distribution and Home Depot, launched the Green Renovator Project to train and certify professional contractors on building science, energy efficiency and green building practices and technologies. Phase 1 of the program piloted the curriculum and with 43 Renomark renovators who are committed to raising the bar in the industry in terms of both professionalism and knowledge.

Example: Natural Resources Canada Training subsidies

For the past five years NRCan has subsidized costs for HRAI’s design training courses (Heat Loss/Heat Gain [equipment sizing], Ventilation System Design, Duct Design, Hydronic Design). The program is based on NRCan’s knowledge that properly trained HVAC designers lead to more efficiently built homes and buildings.

Initiatives for CEEA:

- ❖ CEEA will work to increase the membership of Canadian colleges and universities in CEEA. This will enable CEEA to take on a coordinating role in bringing educational institutions and programs together to develop strategies for promoting awareness of their green programs and the green careers to which they lead. These strategies may include activities such as lobbying the federal and provincial governments for further investments in skills training programs.
- ❖ CEEA will build upon its existing online Job Board and LinkedIn network so that CEEA can collect and disseminate information about energy efficiency careers and education programs.
- ❖ CEEA will incorporate messaging about the benefits of pursuing “green collar” jobs into its online and social media platforms giving these opportunities greater profile
- ❖ A marketing effort is necessary to educate students, parents and guidance counselors about these programs and careers, and to repaint them as highly skilled, in demand “green collar” careers. CEEA will develop a program seeking government as a partner in order to deliver an effective educational tool that also links government incentive programs to training and certification.
- ❖ CEEA to publicize on its own or in collaboration with groups such as Electricity Human Resources Canada, government policy and program best practices to promote labour capacity building.

¹³ saveONenergy, For Business, “Training & Support” <https://saveonenergy.ca/Business/Program-Overviews/TRAINING---SUPPORT.aspx>

5. THE BUILT ENVIRONMENT

The built environment has a significant role to play in accelerating energy efficiency gains. The building sector is estimated to account for more than 30% of global CO₂ emissions and accounts for 30-40% of global energy use.¹⁴ There are significant gains to be made in this sector and according to the Global Buildings Performance Network, the buildings sector could decrease energy use for heating and cooling by over 40% despite at least a 100% increase in floor space by 2050.¹⁵

Tools for Property Managers:
BOMA BEST and ENERGY STAR® Portfolio Manager allow property managers to measure indicators so efforts can be deployed to educate and incentivise clients to change their behaviours

Governments, building managers, developers and consumers all have responsibilities to improve existing buildings and building and purchasing more energy efficient buildings in the future. Governments, as occupants and owners of institutional and public sector buildings, have significant energy footprints and thus a responsibility to “walk the talk” and improve their own energy efficiency practices. Property managers must meet the expectations of their sophisticated, energy efficiency-conscious clients, and educate and motivate their less conscious clients, devoting an increasing amount of time to the management of their buildings in order to encourage and maximize energy efficiency.

A persistent challenge the built environment faces is the lack of consumer awareness and understanding. Consumers of new homes face difficulty evaluating and monetizing the economic gains of a ‘green’ home; the concept may hold appeal but the incremental cost compared to other options can be a disincentive. Consumer education and home labeling is important for bridging this gap, as are programs and tools that offset costs. With respect to ICI, new technologies allow property managers to monitor and respond to building energy usage, while new initiatives that score and publicize building performance will help tenants and consumers make comparisons among buildings which may influence their decision making. The City of Philadelphia’s “The Building Energy and Benchmarking Law” requires large buildings to report their electricity, natural gas and water usage; buildings then receive an energy performance score and building managers will be able to access city and utility resources to improve building efficiency.¹⁶

Canadian homes are more energy efficient. A home built in Canada today is 66% more energy efficient than an identical home built in the mid-1970s, while a home built in the mid-1970s uses 28-44% less energy today than when it was built (on average, a typical home was 28% more energy efficient than when built, and after a home concluded the federal government ecoENERGY Retrofit Home grant, the average home was 44% more energy efficient).¹⁷ The building envelope has been critical to achieving

¹⁴ Global Buildings Performance Network, *Buildings For Our Future: The Deep Path for Closing the Emissions Gap in the Building Sector*, July 2013 http://www.gbpn.org/sites/default/files/06.BuildingsForOurFuture_Low.pdf

¹⁵ Slide number 6 of Tom Roper’s presentation referenced the Global Buildings Performance Network

¹⁶ Mike Dunn, *CBS Philly*, “New Law Requires Large Buildings In Philadelphia To Report Energy Usage Annually”, July 28, 2013 <http://philadelphia.cbslocal.com/2013/07/28/new-law-requires-large-buildings-in-philadelphia-to-report-energy-usage-annually/>

¹⁷ Canadian Home Builders Association, *Energy efficiency in homes: a Canadian success story* http://chba.ca/uploads/policy%20archive/2013/EE%20in%20Homes_Final_LR.pdf

energy efficiencies in both new builds and retrofits; it should be treated as a priority within policy and regulations and should not be compromised in trade-down in codes.

The most sustainable and affordable energy is the energy not used. Today's builders have the technology, creativity and ability to design, build and operate more efficient buildings. Consumer demand needs to be fostered, to drive further innovation, and financing tools/options that enable them to achieve these designs is critical. Whether building codes are moved up gradually, drastically, or remain as they are, builders across the board will be driven to innovate if broader consumer demand dictates it.

Initiatives for CEEA:

- ❖ CEEA will work to encourage energy efficiency ratings in a format that can help consumers and tenants identify and realize savings; drawing upon successes in other jurisdictions, such as the City of Philadelphia.
- ❖ CEEA will continue to advocate for the adoption of the new national building code standards for both residential and building (NECB and NBC s9.36) by all provinces and territories.¹⁸
- ❖ CEEA will monitor and publicize new policy initiatives such as the building strategy in Vancouver, and disseminate information about the lessons learned through CEEA's online platforms.
- ❖ CEEA will support and encourage adoption of the new EnerGuide Rating System (ERS) in 2014 towards provincial labeling for new and existing homes that protects consumers and rewards homeowners who have invested in energy conservation.
- ❖ CEEA will encourage governments to develop incentive programs and innovative financing tools that are responsive to the price sensitivity of one-, two- or five-year payback periods for energy efficiency retrofits.
- ❖ CEEA will advocate for harmonization municipal regulations and the full enforcement of codes.
- ❖ While CEEA will promote new technologies and initiatives, CEEA will be clear that a focus on the building envelope is critical in new builds as well as retrofits and should not be trade-down in codes. The building envelope should be treated as a priority within policy and regulations and should not be compromised with regards to energy efficiency.
- ❖ CEEA together with the Ontario Home Builders' Association created EnerQuality in 1998 to deliver voluntary programs to the residential construction industry with the goal of building capacity and increasing acceptance of energy efficiency and green building in mainstream homebuilding. EnerQuality's most successful program to date has been ENERGY STAR for New Homes, under which they labeled 29% of new homes built in Ontario in 2012. EnerQuality then introduced GreenHouse Certified Construction program to include water and waste as key attributes of high performance new homes.
- ❖ This year, EnerQuality is developing a new program to instigate the same market transformation they achieved in the single-family market but now in the mid-high rise condominium market. The Building Performance Project is the first program of its kind to engage the development industry to focus on the energy, water and waste consumed in buildings and to adopt practices that will significantly reduce them.

CONCLUSION

¹⁸ National Energy Code for Buildings (2011) and s9.36 energy standards of the National Building Code (2012)



Much has been achieved in the last year. CEEA has embarked on a new and exciting journey and now has tangible goals to pursue, benefits to provide to its members and ways to measure its ongoing growth and success. The following section summarizes the specific advocacy objectives CEEA will pursue over the next 12-24 months. We look forward to continuing to provide thoughtful, tangible and relevant positions and ideas that will further energy efficiency efforts at all levels of government and with consumers and industries in all corners of the country. We will be reporting back to our members on a regular basis to highlight the progress we have achieved.

None of this is possible without the support of our members, the hard work and dedication of our Board of Directors and the support of many partners such as Scotiabank, Natural Resources Canada's Office of Energy Efficiency – as well as the people who made this all happen, David Herle and Alex Swann of the Gandalf Group; Brett James, Chris Benedetti and Carly Martin and all of Sussex Strategy Group. Our staff deserves a big thank you especially Connie Pedersen, Judy Opar, Isabel Metcalfe and Jane Thompson.

LIST OF INITIATIVES

The Role of All Levels of Government

- ❖ CEEA will engage with government(s) to help them develop a vision for energy efficiency and promote it.
- ❖ CEEA will seek opportunities to partner with all levels of government to host information on energy efficiency initiatives, service providers, databases, policies, regulations and programs. By seeking out such opportunities, CEEA could become a one-stop shop with information on opportunities for industry, hosting key information on a centralized, up to date and reliable website. CEEA acknowledges this will be a challenge but the need for this service is real.
- ❖ CEEA will pursue collaboration with Canada's financial institutions to develop and promote green mortgages and green insurance policies.
- ❖ CEEA will spur a project to identify a feasible, revenue-neutral tax mechanism for energy efficiency that stakeholders would support and could be adopted by the federal and provincial governments.
- ❖ CEEA will facilitate growth of the energy efficiency goods and services market and sector through local economic development activities – identify energy efficiency as an economic cluster and priority as the Pacific Coast Collaborative has done.

Communicating the Energy Efficiency Message

- ❖ CEEA will continue to promote energy efficiency and disseminate knowledge about new initiatives and technology through CEEA's website (<http://energyefficiency.org/>) and via social media. CEEA will continue to build up its website and social media presence, including its:
 - Big Idea Forum: LinkedIn Discussion Group
 - CEEA's Efficiency Matters Blog
 - Twitter account (@CdnEnergyEffic)

Transportation and Energy Efficiency

- ❖ CEEA will work to build up its membership within the transportation sector, to bring interested parties together and develop a strategy for CEEA to advance on behalf of the sector.
- ❖ CEEA will play an active role in hosting and disseminating information on government and industry initiatives in transportation energy efficiency.
- ❖ CEEA to publicize best practices of government policies and programs that promote alternative fuel vehicles, such as B.C.'s *Clean Energy Act* GHG reduction measures (fuel switching to natural gas vehicles), Low-Carbon Fuel Standard (including offsets for low-carbon fuels), fuelling stations and LiveSmart BC Clean Energy Vehicle Program.
- ❖ CEEA to work with members, to start the discussion of what 'demand side management for transportation' initiatives would look like, and what the role(s) for government would be.

Training and Education for Energy Efficiency

- ❖ CEEA will work to increase the membership of Canadian colleges and universities in CEEA. This will enable CEEA to take on a coordinating role in bringing educational institutions and programs together to develop strategies for promoting awareness of their green programs and the green careers to which they lead. These strategies may include activities such as lobbying the federal and provincial governments for further investments in skills training programs.

- ❖ CEEA will build upon its existing online Job Board and LinkedIn network so that CEEA can collect and disseminate information about energy efficiency careers and education programs.
- ❖ CEEA will incorporate messaging about the benefits of pursuing “green collar” jobs into its online and social media platforms giving these opportunities greater profile.
- ❖ A marketing effort is necessary to educate students, parents and guidance counselors about these programs and careers, and to repaint them as highly skilled, in demand “green collar” careers. CEEA will develop a program seeking government as a partner in order to deliver an effective educational tool that also links government incentive programs to training and certification.
- ❖ CEEA to publicize on its own or in collaboration with groups such as Electricity Human Resources Canada, government policy and program best practices to promote labour capacity building.

The Built Environment

- ❖ CEEA will work to encourage energy efficiency ratings in a format that can help consumers and tenants identify and realize savings; drawing upon successes in other jurisdictions, such as the City of Philadelphia.
- ❖ CEEA will continue to advocate for the adoption of the new national building code standards for both residential and building (NECB and NBC s9.36) by all provinces and territories.
- ❖ CEEA will monitor and publicize new policy initiatives such as the building strategy in Vancouver, and disseminate information about the lessons learned through CEEA’s online platforms.
- ❖ CEEA will support and encourage adoption of the new EnerGuide Rating System in 2014 towards provincial labeling for new and existing homes that protects consumers and rewards homeowners who have invested in energy conservation.
- ❖ CEEA will encourage governments to develop incentive programs and innovative financing tools that are responsive to the price sensitivity of one-, two- or five-year payback periods for energy efficiency retrofits.
- ❖ CEEA will advocate for harmonization municipal regulations and the full enforcement of codes.
- ❖ While CEEA will promote new technologies and initiatives, CEEA will be clear that a focus on the building envelope is critical in new builds as well as retrofits and should not be trade-down in codes. The building envelope should be treated as a priority within policy and regulations and should not be compromised with regards to energy efficiency.
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