

Participants

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Scott McLeish, Honeywell

Forrest Smith, Principal, EcoSol Consulting Ltd.

Dialogue

Ann Dale

Thank you everyone for agreeing to talk on-line today on a topic that really is the basis for all life on the planet--energy. I really think our sustainable future depends upon us changing our current energy use and production and moving to greater energy security, particularly in light of increasing climate change impacts. Before we begin our discussion, however, could you briefly introduce yourselves and your 'passion' around energy? Jim, perhaps you can go first, Deana, and others?

Jim Hamilton

Good afternoon everyone. My name is Jim Hamilton. My interest in energy and its impact on our environment comes essentially from my sense of family, both my immediate family and the larger family of mankind. As one friend of mine puts it, we are only here as visitors and should leave the earth as it is.

As to my passion around energy, it centres simply on my misquote of something said by Ghandi many years ago. "Much can be accomplished by simply doing

something."

Deanna Douglas

Good Afternoon, I'm Deanna Douglas, Bursar (VP Finance and Administration) at Langara College in Vancouver. During the period 1998 – 2004 I worked with an energy steering committee that resulted from a partnership between our national association (ACCC) and Natural Resources Canada. The committee focused on showcasing leadership in energy efficiency in the College sector, encouraging colleges to systematically look at energy improvements in old and new buildings, sharing success stories with the sector plus identifying and reducing barriers to initiatives.

Sharing information seems to be a good way to move the agenda forward.

Forrest Smith

Forrest here, Good Day All. My passion for energy was awakened in 1976 at solar energy of Canada conference in London Ontario when I heard Amory Lovins talk about the soft energy alternative, the path not taken! That for me was a transformative moment professionally and personally. Since that instead I have been embroiled in energy in one way or another up to today.

Scott McLeish

Hello my name is Scott McLeish. My passion for sustainable energy is to promote it and develop it with groups that have resources and means to initiate sustainable projects in Canada. I hope I am in the right area.

John Brennan

Good afternoon. My name is John Brennan. My interest in energy has developed over the many years that I have spent developing and delivering energy efficiency improvement programs. The potential for using energy resources in a more sustainable fashion is exciting and a worthy challenge.

Ann Dale

Scott, you are indeed in the right area, and welcome panellists, Rodney Macdonald will be joining us shortly. We have a lot of expertise on this panel, people who are thinkers and doers and I look forward to our discussion.

Rodney McDonald

Good afternoon fellow panellists. My name is Rodney McDonald. I am a sustainability specialist working in the areas of energy efficiency, green building and community sustainability. Currently I work in Winnipeg as the Sustainability & Standards Specialist for Manitoba Hydro (and through this position, I chair a national provincial-territorial-federal committee generating support for the update of Canada's model national energy code for buildings) and I do a bit of consulting work as a Principal of McDonald & Hardess Sustainability Group. I am also the President of the Manitoba Chapter, Canada Green Building Council. My passion around energy stems from my work on energy codes, my interest in green building, and my care for the natural environment. There is much work to be done in this area!

Scott McLeish

I am currently working on three projects—two small solar, and one large cogeneration.

Ann Dale

Can each of you give me 1-2 examples of leading-edge energy innovations in sustainable infrastructure in your community, or across the country, give us a little description, and explain why it is innovative?

Deanna Douglas

In addition to the new Langara College building and what should be LEED Gold certification <http://www.langara.bc.ca/news/construction/index.html> there are many innovations in Colleges in British Columbia and other provinces. Most of these take advantage of situations/partnerships in their own communities and/or campuses ... a few examples are Okanagan College in BC working with the City of Kelowna waste water treatment facilities <http://www.okanagan.bc.ca/Page10616.aspx> ; Red River College in Manitoba reused deconstruction materials, installed photovoltaic, a prairie grass section on the roof plus many other unique green initiatives which are described at <http://www.rrc.mb.ca/index.php?pid=904> Sir Sandford Fleming College in Ontario has long been a leader in our sector. Information on their Environmental Technology Wing <http://www.flemingc.on.ca/news/releases/200410121039.cfm> indicates use of wind towers among the many environmentally sound initiatives.

I know this is more than two, but couldn't decide which two to use.

Scott McLeish

I am working with a hospital installing a solar wall to reheat makeup air....a long payback but fairly inexpensive.....we have not done this before.....also another installing solar panels to preheat city water for the hospital.....short paybackand a hospital installing cogeneration with new type generators that act in cogeneration mode with dual fuel boilers.....innovations in that it can act in cogeneration mode when necessary and financially feasible and on non cogeneration mode otherwise.

Rodney McDonald

Manitoba has one of the largest wind farms in Canada. A 99 MW wind farm located approximately 150 kilometres southwest of Winnipeg in the town of St. Leon Manitoba. It is innovative because it is the first of its kind in the Manitoba: <http://www.airsourcepower.com/uploads/StLeon.pdf>

Since the completion of this wind farm the Province of Manitoba has issues a call for proposals for another 1,000 MW of wind development.

Jim Hamilton

This really depends on what is meant by leading edge; I think the key "leading edge" here is how we organize ourselves, and for that reason I would volunteer, first, the efforts of the City of Toronto to encourage city-wide use of energy performance contracting as one major innovation as they are trying to deal with a municipal acceptance of energy-saving investments across all aspects of the municipality. Another interesting innovation (again from an organizational perspective) would be the use of on-bill charges to finance energy improvements. There are obviously others such as efforts to introduce wind-power into grids.

Forrest Smith

In the silence what I can add was that in the instant I was convinced that there was a solution to the energy situation at hand we needed to come to grips with the technology available or to be available and make it happen. I then went through a phase of thinking lack of money was the problem maturing to the realization that people were the problem. There is enough money, technology exist we just need to get on with it. Amory is saying much the same today as he said 40 years ago, and I am with him.

John Brennan

Greening the Infrastructure at Benny Farm, Montreal Quebec is an example of innovative energy infrastructure. The redevelopment incorporated renewable energy in the form of a ground source geothermal system to provide heating and cooling to some 190 housing units. This may have been the first of its kind in that part of the country. The community established its own utility to manage the on-going operation of the system.

Deanna Douglas

I believe this project won an award at the Holcim Sustainable Construction event we attended last fall.

John Brennan

Yes it did win the award. I attach the release for information.

Rodney McDonald

My second leading edge innovation is Manitoba Hydro is currently building a new corporate head quarters in downtown Winnipeg. To my knowledge this is the largest LEED registered building in Canada (600,000+ square feet). The building is designed to be 60% more energy efficiency than the model energy code. The team has designed a climatically responsive building that will rely on natural ventilation and solar convection to move air through the building. It is also hoped the site will promote reduced vehicle use by staff, since it is on many major bus routes and bike storage and shower facilities will be available.

http://www.hydro.mb.ca/issues/downtown_home.shtml

Ann Dale

Scott and Deanna, always the question of the day, where did the money for these innovations come from?

Scott McLeish

The money essentially comes from an energy project that involves other energy saving measures and the sustainable ones fit the financial model....we provide the funds.....then payback comes from savings.....in the cogeneration example it also includes a form of distributed generation of steam to other nearby facilities.

Deanna Douglas

I can't be sure about the financing of all of these - I believe that the Colleges chose to make an investment and in many cases have partnered with others, including provincial hydro companies, to share the cost. For smaller initiatives there is usually an acceptable pay back (7 years or so) so a business case is necessary; for larger initiatives the cost needs to be spread over many years - our geothermal as an example. We just made a conscious choice to do it.

Forrest Smith

I would like to suggest that while solar wall, geothermal are great and have applications particularly as part of new construction or a major renovation these types of projects at today's energy cost will not cut it. In National Defence where I have some experience they have implemented probably more Energy Performance Contracts than any other organization in Canada and the foregoing did not make the cut in one of the 20 plus contracts that range for \$5M to \$20m in terms of investment.

Scott McLeish

I agree with Forrest in that most of the projects I am involved with are Performance Contracts which enable sustainable energy measures as part of an overall project.

Ann Dale

John, what is the pay-back period for a geo-thermal system?

John Brennan

It may be 15-20 years but I will have to confirm.

Forrest Smith

Innovation --- in the area I work in, existing buildings, the majority of the effort is what I would term 'grunt work'. Sure there is new technology but most of what makes up the 20% to 30% reductions in existing building stock in my experience is off the shelf implementation of basic things like more efficient lighting, enhanced controls. In fact 2-5% reductions are typically possible from making things work as they were intended.

Jim Hamilton

I think Forrest is right on and the examples provided add evidence to this. The issue is not one of money or of technology, but one of organization and "get going" .

Deanna Douglas

I'd agree -- when there is a real commitment to do something the funds can usually be found

Scott McLeish

The City of Ottawa is currently in the process of working with Ottawa Hydro to provide on-bill financing for energy projects within the city.

Ann Dale

What are "on bill charges" please?

Jim Hamilton

"On-bill" charges are a process whereby an energy provider finance improvements in a facility, such as my house, and then recoups their investment by adding on a surcharge to an energy-bill e.g. the energy bill they give to me. In effect, 'on-bill' charges act like a lien on a house and such the energy-provider is guaranteed repayment.

Ann Dale

Forrest and Jim, Danny Harvie from the University of Toronto in a previous e-Dialogue on climate change, one of our first actually, stated that we can achieve green house gas reductions of 30% with no new technology just retrofitting old buildings and with new technology--60%. What do you think, and Rodney, Deanna, do you have figures on what the colleges have saved through retrofitting?

Deanna Douglas

Sorry I don't - will see if I can find some info - and a reminder that talking about 'savings' rather than cost avoidance can in some ways mislead people.

Rodney McDonald

I don't have figures for colleges, but these numbers sound reasonable based upon my knowledge.

Jim Hamilton

Yes the numbers are not that bad; we did a study for NRCan several years back that showed something similar for off the shelf technology, but I suspect the 30% may be a tad low. As to new technology the 60% is valid but a rider should be put on as to reliability. John Brennan can relate to that in terms of certain government laboratories.

Rodney McDonald

Manitoba Hydro, similar to BC Hydro, has a number of Power Smart programs for residential, commercial and industrial. A new residential insulation program for existing homes pays for close to 100% of the cost of the insulation product.

Scott McLeish

In the case of the cogeneration plant, the excess steam provided by the boilers is sold and creates income to pay for the overall cogeneration project

Marilyn Hamilton

Greetings Ann and Panellists. I have some questions here from the e-audience. First from Darcy Hartwick from Infrastructure Canada's Research & Analysis division.

To Deanna: Is there any sense of how much energy consumption can be reduced by adopting LEEDS standards and/or retrofitting old buildings? Any estimates of the financial cost of such upgrades or changes to design standards? Much of Canada's infrastructure is approaching the end of its useful life, suppose we build what we can to standards like those you gave in your example - how much could we reduce current consumption by (even a rough %?)?

To Rodney - a recent article suggested providing more than 10% of a grid's energy via wind power would be dangerous due to unpredictability and fluctuations in the power generation of wind turbines. Thoughts or comments on this statement and the limitations of wind?

To Scott - are there any concerns about solar panels and weather conditions (specifically, having them become covered in snow)? How does a solar roof compare to a green roof?

Deanna Douglas

Relying on what our energy modelling results are we should use 71% less energy than the base case allowed by the model national energy code for buildings - it that something you or another panellist can convert.

Jim Hamilton

I am under the impression (I may be wrong) that several wind projects have not delivered the power promised in the terms of their contracts and that they are facing penalty clauses of one type or another.

Rodney McDonald

Thank you for your questions Darcy. Regarding the question on wind I'm sorry I don't have an answer for you. I'm not involved in transmission or distribution, and I'm not up on the wind energy literature.

I would like to help provide an answer to the question for Deanna. LEED is a green building rating system, not a standard. The minimum energy requirement in LEED is 25% better than Canada's Model National Energy Code for Buildings (MNECB). This is pretty easy to obtain. I know that the average improvement over the model code requirements for building participating in NRCan Commercial Building Incentive program is 35%. 25% to 35% improvement in building energy efficiency is not difficult to achieve with little or no capital cost premium. The key to cost effective and very energy efficient new building design is to use what is called an Integrated Design Process. Some of the projects in NRCan's program have been able to achieve a 50% reduction in energy use with no increase in capital cost by using this integrated process.

Forrest Smith

50% is the starting point for LEED in new buildings but to be frank new buildings is not were it is at. Existing buildings make up 90% of what exists say and so savings 50% in 10% of the stock gets you 5% but savings 30% in 90% of the stock gets you 27%. Simply put for investments paying 15-20% return you can

reduce consumption with existing technology something like 31% in new and existing buildings with in a decade say so as to allow time for implementation.

Rodney McDonald

I should add that the Minister is Energy here in Manitoba is currently considering a set of recommendations from a committee that suggest Manitoba establish an energy cod for new commercial buildings that would require a 25% improvement over MNECB. The report is attached or available at:

http://www.gov.mb.ca/est/energy/pdf/energy_in_MB_report_web.pdf

Scott McLeish

To my knowledge snow will not be a problem unless there is some unpredictable storm...but usually wind and natural snow melting is counted on.....the panels are mounted high on the roof....I am not sure about green roofing.

Marilyn Hamilton

Another question from our audience, are there any examples of where municipalities enforce progressive energy standards in the same way that for example Chilliwack, BC has strict guidelines for storm water management in new developments <http://www.chilliwack.com/main/page.cfm?id=658>

That way developers carry the costs, and the home owners pay more upfront (or at least a market rate) and get potentially large energy savings over time.

Rodney McDonald

One of the main barriers I have encountered in my work on energy codes is an honest lack of awareness/understanding of energy efficiency and all of the benefits of energy efficiency (to the building, occupants, the bottom line, the local community, the country, the globe). In the energy code report I posted earlier we clearly defined "What is an energy efficient building" and articulated three different types of energy efficiency building. This is helping to create a shared understanding of energy efficiency in buildings amongst those who know this term well and those who don't.

Ann Dale

Rodney, can you explain further what you mean by integrated design?

Rodney McDonald

Here is the definition we wrote into the Manitoba Green Building Policy:http://www.gov.mb.ca/est/energy/pdf/green_bldg_policy.pdf

"An integrated design process (IDP) is a holistic, collaborative and comprehensive design process that brings together all design professionals and specialty consultants, along with the building owner, the occupant(s), and other direct stakeholders to design the building as a team. It is not a series of meetings where responsibilities and tasks are assigned, but instead a process whereby people work together to design the building."

I consider integrated design to be just one example of integrated decision-making.

Jim Hamilton

There does have to be a reality to energy projects. Wind does blow, and it does not blow, and therefore can not be the panacea that some people suggest. This approach necessarily applies to a great number of technologies, and from the perspective of someone running a major organization, a major concern. For example, a member of a Board of Directors for a hospital has to primarily be concerned with energy stability when considering energy improvements. Otherwise that person is not following their fiduciary responsibilities. Therefore that person will necessarily be against innovative approaches; they have to be.

Ann Dale

Let's hold the e-audience questions until our last half hour, and move on to our next question. There appears to be lots of energy innovations out there, so, and saving money by doing good for the environment is just plain common sense, so, what are the major barriers in your opinion, to implementing and diffusing these innovations across the country?

Jim Hamilton

I just made a comment re reality of energy investments; that is one barrier. Another is that any organization can only borrow so much money; they are going to invest funds therefore in those areas that give tem the highest rates of return, which rarely will be energy.

Forrest Smith

As the saying goes, what gets measured gets done. It is actually worse than that, what your boss measures gets done. The measurement of energy performance is a weak to non-existent practice. Management is not being appropriately informed starting with Governments and into corporations and institutions. There is very little work being done of energy intensity by category of building and further breaking down this intensity into weather sensitive and non-weather sensitive components.

Deanna Douglas

commitment, time and money are the barriers in my opinion - and I could make the observation that commitment, generally, is much stronger now than even five years ago.

Scott McLeish

There are 3 barriers that I encounter. First is long payback periods. Commercial and industrial facilities have short hurdle rates for investment and do not embrace energy savings in the long term. Second is that measures involving solar and wind are unpredictable and energy stability is what currently keeps CEOs up at night. The third is facilities that have the attitude of "we have done it all" and feel they have reduced energy to a minimum, despite information offered otherwise.

Deanna Douglas

Our committee heard that response (your third barrier) many times.

Scott McLeish

It is sad but some facility managers do not embrace energy retrofits with a fear of being classed as "poor managers" if the facility is found to be non energy efficient after they have told the Board they have "done it all".

John Brennan

One of the main barriers to a greater rate of energy efficiency penetration is a general lack of energy management skills and knowledge all around.

Rodney McDonald

Our mindset is a barrier.

Lenore Newman

Hi everyone, this is Lenore Newman, the project research manager. I have been taking part in the audience discussion, and the issue of fossil fuels came up. As we are speaking of barriers, how do we overcome the fact that fossil energy is so very inexpensive? This proved to be a stumbling block for some of the case studies.

Jim Hamilton

This is a tough one; at one level it is simply the result of the laws of supply and demand. Alternatively, energy markets can be manipulated with taxes (see the tax revenues when you purchase gas for your car). The real problem with this sort of manipulation is that energy taxes really hurt lower income group as does any flat tax when applied against a necessity. Another alternative is not to tax the energy but rather the use of energy such as the use of high-end SUVs. (my favourite target). The problem here is that the purchasers of high end products are also very articulate.

Ann Dale

Again, a case of not having the prices right, and yet, to our economist, Jim Hamilton, I thought the market always got prices right?

Jim Hamilton

Without being teased, markets do not always price what should be priced such as damage to the environment. This is why my mind is tending now to the use of regulations. Certain things should just be restricted; we don't need automobiles with 8, 12 or whatever cylinders. As an example of restrictions look at what a Republican governor is now doing in California. They are starting to really rein in the energy users.

John Brennan

It is interesting that we have not seen the rise in demand for energy efficiency improvements to the extent that we expected as the prices for most energy commodities increased substantially over the past three years.

Ann Dale

John, any thoughts on why?

Jim Hamilton

Another major factor with energy is that often energy as a percentage of operating budgets is not all that great. An executive only has so much time in the day and will focus on where major savings lie. That and all of the other comments I have read lead me to conclude that we are relying too much on rates of return with respect to energy and we should put more emphasis on just old fashioned regulation.

Rodney McDonald

I agree with you Jim. It sounds like you would agree then with William McDonough (the great green architect), who believes that the need for regulation is a sign of market failure.

Forrest Smith

Let me say more on measuring performance. In the institutional settings (University, Military Bases, Prisons etc.) sub metering does not exist. When you aggregate data something gets lost, the detail that has the potential to inform I suggest. Further if you had that detail you need meaningful benchmarks to measure again, benchmarks that can be adjusted as a first cut to weather, then to operating conditions.

John Brennan

I would suggest that most organizations are not at a level of measuring performance. They are struggling to understand that they may have an energy management opportunity.

Deanna Douglas

I agree -- getting me to understand that I had an opportunity took a number of people - engineer/MBA doing a business case, outcomes confirmed by trusted colleagues in the system, etc

Ann Dale

Forrest, this seems to me kind of basic, get the costs right, how do we get the measurement of energy performance in place? Deanna, didn't NR Can do some benchmarking of college energy sector performance?

Deanna Douglas

they did some - voluntary participation

they worked with us and developed guides

Commercial and Institutional Retrofits - Guide: Benchmarking Executive Summary For College Finance Officers
View as: HTML PDF

This brochure summarizes how calculating your college's energy intensity and comparing it with other facilities helps to identify potential opportunities to save money.

and

Commercial and Institutional Retrofits - Guide - Benchmarking and Best Practices Guide for College Facility Managers
View as: HTML PDF

This document is intended to help college facility managers calculate their college's benchmark performance and compare it with that of others in the same region and across Canada.

find them at

<http://oee.nrcan.gc.ca/publications/infosource/home/index.cfm?act=search&PrintView=N&Text=N>

Scott McLeish

Most ESCOs offer energy intensity measurement as a first step in our "sales process". We routinely offer this to facilities. We provide a comparison free to interested facilities to other similar facilities to engage them in the process of an Energy Retrofit. We measure Building Energy Performance Indices and provide comparisons.

Rodney McDonald

I think this is why the US Green Building Council is doing so much to communicate the other benefits of green and energy efficiency buildings (in created productivity, shorter hospital stays, higher retail sales, better performance in schools)

Also there is a good older report from the Rocky Mountain Institute (for you Amory Lovins fans) that indicates that the biggest cost in a building per square foot is salaries, and if you can increase productivity by even 1% this can pay for the cost premium to build a better building. See Greening the Building and the Bottom Line:

http://www.rmi.org/images/other/GDS/D94-27_GBBL.pdf

Forrest Smith

Benchmarking Reports I have seen to date represent a start but one major shortcoming is they typically reflect the state of what is so not what it should be or could be. Three very different states. I am interested in the What it Could be State as the Benchmark. This is what optimal office buildings of this size should consume and further this is the weather sensitive and this is the non weather sensitive component.

Rodney McDonald

For new buildings, this is why energy modeling is so important. It allows design teams to play "what if".

Ann Dale

Seems to me there is a link between Forrest's comment on the criticality of measurement and awareness, Rodney?

Rodney McDonald

Yes, people like to see examples with charts and graphs. We can't create the charts and graphs without the data. And we don't get the data unless we do building performance measurement with good metrics.

Ann Dale

And the state of Texas, ironically, is leading the way in energy innovations. So, it would appear that governments have a crucial leadership role to play in stimulating/changing energy consumption. However, as the recent election in Ottawa showed, a wealthy city, that people do not want to pay any more taxes, gets to Hawkins work on taxing the bads and not taxing the goods. Article attached.

File attachment [Hawken.Thewholeenchillada.doc](#) (58.5 KB)

Scott McLeish

I believe we are beginning to see a huge move toward interest in energy saving projects.....I am dealing with customers that 3 years ago would not have any interest at all....we also have a group that is offering non guaranteed energy saving projects and they are extremely busy.....we are selling projects that would not have been possible without the energy cost increases .

Ann Dale

Scott, again price sensitivity seems to be crucial, I think that people are now realizing that they are selling their children's future for present options, and want to do the right thing both economically and environmentally, gets back to integrated decision-making, but we need leadership to signal to people when the market is failing to make those signals because of not costing the environmental inputs?

Jim Hamilton

I agree with Scott here. I also wonder whether the reason has something to do with people starting to take the attitude that it is not socially acceptable to waste energy. .

Deanna Douglas

Attached is an overview of Malaspina University College addressing health and well being of occupants.

File attachment [pub. malaspina.doc](#) (51 KB)

Forrest Smith

With respect to personnel costs yes they are in offices at least 10 times the cost of energy to put it in perspective. I am of the opinion that improving energy performance will impact in a positive way on human performance. The days of freezing in the dark or living in a mushroom factory are over and every professional I know has moved out of the dark ages on this subject.

Ann Dale

Let's spend the next 15 minutes with our final question, and then take questions from the audience if there are any more? We have identified a lot of barriers-- time, money, fear of failure, long pay-back periods, and during our conversation, you have mentioned some solutions. Give me, based on your expertise and experience, solutions to accelerate the take-up of more sustainable energy infrastructure. What should be our priorities, who are the leaders, what are the incentives???

Forrest Smith

I think one of the main barriers on awareness is the use of "Innovation" and the talk of "New Technology". The at the coal face manager is not going to leap for joy when someone is trying to sell him innovation. If you kick the tires with these people they all know at least 80% of what needs to be done BUT they have "other challenges" and the list is long. A little recognition and reward for doing what I earlier referred to as the "grunt work" would go a long way to making things happen.

Rodney McDonald

One priority is getting energy efficiency into building codes. Canada is currently a laggard in this area. The EU, UK, US and China, have minimum energy efficiency requirements for buildings. There are no requirements in our National Building Code of Canada for energy efficiency. There are four core objectives in the building code (health, safety, accessibility, and fire and structural stability). Provinces and Territories, having jurisdiction over buildings, adopt this code. Only Ontario has additional provisions for energy efficiency. There is currently work underway to update the model energy code and encourage a number of provincial/territorial jurisdictions to adopt the updated model code. This will have a tremendous impact on energy use in this country.

Jim Hamilton

These codes still have a long way to go, don't they? I've seen estimates that if off-the-shelf technologies are applied to a brand-new building built adhering to the Model Energy Code, energy savings could be increased by as much as 25% if not higher.

John Brennan

The current MNEC was released in 1997!

Deanna Douglas

We have just completed a rezoning, development and building permit with the City of Vancouver and they are certainly pushing hard, if it is not in code, for sustainability.

Rodney McDonald

Yes, the codes have a long way to go. If there is an update of the Model National Energy Code of Canada - the decision to update the code rests with the Canadian Commission on Building and Fire Codes) - energy efficiency folks are hopeful that an updated code would achieve a level of efficiency 25% better than the current code document.

Jim Hamilton

Hey, that's only a decade ago (at least in about 37 shopping days before and after Xmas).

Jim Hamilton

I think what will be key here over the long term is making people responsible for their energy usage. To me that means restricting certain uses, and in others putting on taxes so that it is in people's best interest to lower their use of energy through energy savings investments. I also think it is essential to simplify processes for people so from a legal or organizational sense it is no big deal to enter into an energy savings contract or investment.

Forrest Smith

Exactly Jim, here in Victoria if you can believe it they are building large 20 floor condominiums heated with electric resistance heaters, this is really penny wise pound foolish. We are on an island with very little generation capacity and two old underwater feeds from the mainland just waiting for a disaster. Electrical resistant heat is cheap to install, maximizes the sellable space and is cheaper than oil by a wide margin and in the same ball park as natural gas. We need regulation if price will not do it.

John Brennan

The priority areas for uptake of sustainable energy infrastructure need to be the commercial and industrial sectors. The institutional sectors will continue to make progress without further incentives. The incentives for the commercial and industrial sectors will likely be found in some form of tax measures.

Deanna Douglas

I agree with this.

Forrest Smith

Price is critical. I am sure Scott like myself with exposure across this country knows that the electrical costs are a big variable. Governments like BC take pride in providing cheap energy, and really cheap energy to the big consumers, like 4 cents/kWh. Manitoba, with all due respects is right up there with cheap electricity.

Scott McLeish

I think the solution depends on leadership. Both leadership from the community leaders and the government. The hospital doing the solar wall has an 18 year payback....but the CEO wants to demonstrate to his community he is doing the right thing. Right now energy is the single fastest growing line item for most facilities so leaders are becoming involved in the actions to reduce energy. They are becoming engaged. As well we need a government that makes energy efficiency important and something to be proud of. I do not see that now. I believe we also need a system of grants and rebates to encourage energy

projects.

Rodney McDonald

Leadership, starting at the top. I am afraid it is not in the interest of a politician from Alberta to make and take the bold step necessary to start the process. So failing that then start at the other end. This is certainly not the case in the States. There is a quote from Margaret Wheatly that goes something like “we do not need a critical mass, we need critical inter-connections.: I this is how it will happen. Also:

1. Better planning of urban centres to create walkable communities or create walkable communities by adding density to existing communities (too many people in North America have to use a litre of fuel to go purchase a litre of milk).
2. Federal funding for transit. I believe Canada is still the only G7 nation that does not provide federal dollars for transit. Here in Manitoba, and I suspect elsewhere, the segment using the most energy is transport. I’m still astounded that in the country’s largest city (Toronto) I can’t take a subway to light rail from the airport to the centre of the city (this is common in Western Europe and even Portland, Oregon).

Forrest Smith

Interesting, here in Victoria transportation consumption has been steadily declining over the last five years. Yes going down. Here we collect a cent or two per litre sold so we can accurately measure consumption based on dollars collected. I could not believe the results but clearly more fuel efficient vehicles are making a difference even if they are SUVs. So enacting the on the shelf vehicle emission regulations will make a difference.

Speaking of Alberta, they could use a high speed rail link between Calgary and Edmonton. That highway is packed with cars all hours of the day.

Ann Dale

Seems to me we have the makings of a national energy plan for our beloved country. Priority action areas are the commercial and industrial sectors, based on NRCan's successful energy efficiency program for the institutional sector, one of which the colleges led, through the chairing of Deanna Douglas. Energy

performance measurement is crucial, and should be implemented immediately (any more details, panelists?). Private/public partnerships for leading-edge demonstration projects should be stimulated for greater infrastructure diffusion, government leadership through proactive regulations, and the elimination of government rebates to offset energy prices, and most critically, amending the National Building Code to integrate energy efficiency into building codes???

Forrest Smith

Another interesting thing in the transportation field is the adoption of the Prius by the taxi drivers here in Victoria. It is like a revolution. I think 50-60% of one firm's fleet is converted and the operative practice in this city when it is time for a new vehicle is a Prius. The savings in gas make the payments and then some. Car is paid for in three years based on 100% financing.

Rodney McDonald

The Prius is popular here in Winnipeg too. For one firm 70% to 80% of the drivers now own the Prius. The average monthly savings (here in Winnipeg and in Vancouver) is \$1,500. The savings will pay for the \$30k car in 20 months.

Ann Dale

Key issue for the energy plan, use of government incentives to reduce payback times to stimulate take-up of energy innovations?

Rodney McDonald

Integrating energy efficiency into the National Building Code would require consensus from all 13 provinces/territories. We are more likely to realise an update to the model energy code for buildings (as a separate document that can be adopted by some jurisdictions through regulation), which only requires majority support.

Ann Dale

Rodney, key point and practical, the federal/provincial gridlock is such a major barrier to this country's innovation.

Are there any concluding comments you would like to make before we end our conversation? And I again apologize for the bugs in our platform that will be worked out before the next e-Dialogue in this series on transportation, next Wednesday, November 29th, same time, same station.

Rodney McDonald

From my personal experience, moving ahead successfully requires collaboration across silos (figuring out how to work in the spaces between disciplines, departments/organizations, and professions) and integrated decision-making (including its variants such as integrated design for buildings).

Jim Hamilton

I know this is a little off topic, but work has to be done on the fiduciary responsibilities of people responsible for the operations of organizations. Someone mentioned the CEO of a hospital doing a major project to demonstrate to his community the need to save or conserve energy. The question can reasonably be asked why did that person do that? The person's legal responsibility is to run a hospital, not demonstrate energy improvements. If a similar person did that sort of thing within a private firm, the shareholders could probably take legal action against the person. They are there to earn profits, not help the environment. And this is the crux of the fiduciary problem. How are we going to deal with this.

Scott McLeish

Jim I think that this measure was chosen to demonstrate the Hospital's determination to put all their efforts to reduce energy and save patient dollars....unfortunately most of what we do in energy savings is behind the scenes and the public and staff are unaware of what is being done....the measure is low cost but effective.....the commercial market is also showing interest in measures that demonstrate energy efficiency in practical and demonstrative ways.

Jim Hamilton

I appreciate that; I am trying to raise the more general issue of making Board members and officers of companies responsible for energy use within their organizations. Hey, if they have to choose between a marketing investment with a 16% ROI and an energy investment of 13%, which one do they choose.

Forrest Smith

Well if this was the general case I would move to make either one less attractive or the other more attractive as a government because a government has a commitment to the needs of society and to provide for these needs. I suspect the issue is not one of ROI but rather they are not being presented with a choice. Where does EPC sit with respect to ROI?

Rodney McDonald

Here in Manitoba, Manitoba Health is building green buildings. They put it in these terms. If they can reduce annual operating expenditures for energy by \$X, then they can schedule X number more MRI's. Since they have a fiduciary responsibility to provide care, do they not then have a responsibility to do what they can (reasonably) to direct dollars to care rather than other items such as energy bills.

Ann Dale

Critical point, Jim, however, remember our training, if you bring up a problem, you need to also have a solution? Any ideas?

Deanna Douglas

For a possible energy plan, there was an idea earlier of tax incentives -- applicable to commercial and industrial.

John Brennan

The tax measure could be in the form of accelerated depreciation on high efficiency energy consuming equipment.

Scott McLeish

Tax measures are good but a large commercial project will still have a negative effect on a company's debt to income ratio. Incentives reduce that ratio. Also, a relaxation of GAAP for energy projects, allowing more easily achieved operating leases would encourage energy projects in the commercial and industrial

sectors.

Forrest Smith

OK A CARBON TAX. Yes, a tax that is revenue neutral in that it subsidizes and supports conservation efforts. I suggest a 60% is doable if not more and the only question is what would be a practical time frame. Thirty years at 2% a year is not tapping the innovation and talent that exists. Might best set shorter-term target for ten years out at 30% with 60% as the context.

Rodney McDonald

Some say it is only a matter of time before there is the first lawsuit in Canada against a big GHG emitter. This may catch the attention of some.

Ann Dale

We have a lot of information from our conversation, some big ideas but also practical steps that could be taken, thank you one and all for your precious time, your commitment and support for our project, one of the first to be funded under a new program, jointly administered by Infrastructure Canada and the Social Sciences and Humanities Research Council. Take care, good night.

Jim Hamilton

Thank you for the opportunity, and good night.

Rodney McDonald

Thank you for the opportunity to participate. Good night all.

Scott McLeish

Thank you for asking me to attend and I found it very helpful and interesting. Good night.

John Brennan

Well done everyone.

Forrest Smith

What, I was just starting to get going! Good night all and hello Scott I figured out who you were quite some time ago.