CLEAN AIR AND CLIMATE CHANGE SUMMIT PROCEEDINGS

JUNE 2, 2010
TORONTO, ONTARIO

Clean Air Partnership

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About the Clean Air Partnership
Clean Air Partnership (CAP) is a registered charity that works in partnership to promote and coordinate actions to improve local air quality and reduce greenhouse gases for healthy communities. Our applied research on municipal policies strives to broaden and improve access to public policy debate on air pollution and climate change issues. Our social marketing programs focus on energy conservation activities that motivate individuals, government, schools, utilities, businesses and communities to take action to clean the air.

Clean Air Partnership's mission is to transform cities into sustainable, vibrant, resilient communities, where the air is clean to breathe and greenhouse gas emissions are minimized.

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Clean Air and Climate Change Summit Proceedings

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Eva Ligeti

Executive Director, Clean Air Partnership

- Clean Air Partnership was established ten years ago to work across the Greater Toronto Area (GTA) on clean air and climate change issues. At the Clean Air and Climate Change Summit we are highlighting the incredible capacity that has been built in the GTA at the local level to take clean air and climate change actions, and the incredible momentum that has been developed over the past ten years.
- Our reviews of what is going on across Canada show that the GTA is the leading area in terms of municipal and local level action and collaboration on climate change and clean air issues.

At this Summit, CAP is releasing **five scans**[1] on municipal clean air and climate change activities taking place in the Greater Toronto Area:

1. Green Energy Purchasing Scan
2. Green Energy Production Scan
3. Green Development Scan
4. Action Plan Scan
5. Bicycle/Pedestrian Scan

- These actions occurred because mayors and councilors have taken leadership, and because staff meet monthly as part of the Greater Toronto Area Clean Air Council. As a group we look at what is doable, what actions are being undertaken across the world and in our jurisdictions and then staff return to their municipalities and implement these actions.
- We could not have done any of this without our sponsors: Enbridge Gas Distribution, City of Toronto, and Toronto Atmospheric Fund.

David Miller[2]

Mayor, City of Toronto

- Would like to thank all the mayors, councilors, staff and participants from across the Greater Toronto Region working in partnership to do the right thing for our communities and the environment.

[1] Available at: http://www.cleanairpartnership.org/cleanair_and_climatechange_summit
[2] Available at: http://ca.video.yahoo.com/watch/7831310/20740546

- We have worked collaboratively as GTA municipalities and also in partnership with the provincial and federal governments because it is only when we all come together that we can truly achieve our goals.
- One of the things we tried to do in Copenhagen last year, was demonstrate to the nations of the world, that we [as cities] can act to fight climate change and there are concrete actions being undertaken by cities around the world that work, that lower our ecological footprint and create long term sustainable employment. Our message to nations was do not be afraid to sign an agreement, just do it in partnership with cities to achieve our goals.
- The message of this summit is when working together across boundaries we can achieve our goals.
- The GTA is one of Canada's leading regions in taking actions to create more livable and resilient communities. If we look back to where we were 10 years ago to where we are now we can see that because we are members of the GTA-CAC, we have achieved remarkable things. This is because all of our members can share their experiences, lessons learned, both positive and negative, and their resources.

- One of challenges we are going to face is we cannot achieve what we should without a proper partnership with the provincial and federal governments. If we are going to address our climate change and clean air challenges, we are going to have to build better rapid transit. We have to come together as partners, and bring the provincial and federal governments back to the table and work collaboratively on these issues.
- The work we are doing on a regional level is remarkable, let's continue working together. Congratulations on your collaborative work, for succeeding on the ground in real ways.

Patrick Hoey[3]

Director of Regulatory Affair, Enbridge Gas Distribution

- Enbridge has been a sponsor for ten years, and will continue to be a sponsor of the excellent work being undertaken by municipalities across the GTA. We would like to congratulate the GTA-CAC, as well as staff and volunteers for all their hard work in implementing clean air and climate change actions.
- In the past, the smog summit has spurred collaboration among environmental groups, businesses and municipalities to share solutions and build new ideas. Over the years those ideas have now become reality, and deliver real and measurable smog reductions within our airsheds.

[3] Available at: **http://ca.video.yahoo.com/watch/7861074/20832207**

- Enbridge has a long history of trying to deliver sustainable energy solutions and advancing clean air technology. Many of you are aware of our energy efficiency programs. Recently, we have built an award winning hydrogen fuel cell in our backyard here in Toronto, with enough electricity to power 1700 houses. The fuel cell does this all without burning any fuel, and has near zero smog emissions. We have identified fifty other potential opportunities to implement this technology across the GTA.
- We are also working with the City of Toronto on converting organic waste into energy to heat city buildings and facilities. We see this as a way to produce a local green source of fuel. The energy markets are going to change significantly over the next few decades, and we need to work with local municipalities to best meet their energy needs, the needs of local residents and the needs of the environment. It is wonderful to see everyone here today sharing their ideas and with them comes new learning, opportunities and experiences that we can all move forward with in the future.

Chris Turner, Keynote Speaker, "The Great Leap Sideways"

Video: Part 1 of 4[4] | Part 2 of 4[5] | Part 3 of 4[6] | Part 4 of 4[7]
Presentation: The Great Leap Sideways[8]

What is meant by the Great Leap Sideways?

The great leap sideways is the route to your brightest possible future.

- First, we have to imagine all of society as a train on a track. It is a great modern train, but it is headed towards a precipice in the distance. People begin to say they do not think this train is headed in the right direction anymore. On the other side of the precipice they see another train; it is veering away from the precipice, but generally going in the same destination. This is the great leap sideways - the jump from the train heading towards the precipice, to the one on the other side veering away from it. And the easiest way to make the leap is while we are still on the train with enough fuel and momentum to make the jump.
- The great precipice/chasm is the necessity of the leap. It is getting deeper and wider and we headed closer to it.

[4] Video Part 1 of 4 available at: http://ca.video.yahoo.com/watch/7861456/20833538
[5] Video Part 2 of 4 available at: http://ca.video.yahoo.com/watch/7861543/20833758
[6] Video Part 3 of 4 available at: http://ca.video.yahoo.com/watch/7861603/20834046
[7] Video Part 4 of 4 available at: **http://ca.video.yahoo.com/watch/7861747/20834307**
[8] Presentation available at: http://www.cleanairpartnership.org/files/Chris%20Turner.pdf

The Nature of the Chasm

There have been many indicators of the size and nature of this chasm. In 2008, there were three announcements that depict the factors of this chasm.

1. Honolulu Declaration on Ocean Acidification

- The first event was on August 27, 2008; the Honolulu Declaration on Ocean Acidification was announced. This was a joint declaration by all leading marine scientists and coral researchers which said that climate change was the single most important problem facing the world's oceans and eradicating the climate change problem should be the main effort of all conservation.
- The reason for this is the newly discovered problem of ocean acidification. Only named in 2003, ocean acidification takes place because a quarter of all carbon dioxide we omit gets absorbed by the oceans, and turned into weak carbonic acid. This is turning the oceans slightly less basic. The PH of the world's oceans has gone down in aggregate from 8.2 to 8.1. As soon as it reaches to 8.0 coral, and the algae that live on them, will no longer be able to make reefs and will begin to breakdown.
- All the coral reefs have died, and have vanished for millions of years before there was a chance for them to begin building again; this has already happened five times in the history of the planet. Leading marine scientists believe we are ten years from that precipice, and after that point there will be nothing that can be done to reverse the mass extinction of corals.

- The extinction will not be instant, but there will be no reversing the PH of the oceans in such a way as to bring us back from that extinction. It will be mid century or so before they are gone. What this means is a quarter of the oceans bounty, a quarter of all that we eat, and millions of people's livelihood will be no more. Also, one of every two breaths we take is thanks to the oxygen omitted by the world's ocean.
- This is the canary in the climate coal mine. The coral reefs can no longer survive at the rate we are pumping carbon dioxide into the atmosphere.

2. Lehman Brothers Collapse

- The second big announcement was the collapse of Lehman brothers in September 2008. This was how close we came to the collapse of the entire global financial system.
- Banks were founded in the late 19th Century to fund the greatest industrial expansion in human history. This was due to the fact we had captured and

harnessed the single greatest fuel source we had ever discovered as a species - oil.

- It was so easy at the beginning and provided so much energy. We often speak of oil as a problem, or a daily need. But what is a barrel of oil actually worth (besides 80 dollars a barrel)? In energy terms, a barrel of oil provides 6 billion joules of energy (or a human running on a treadmill for eight years).
- The entire financial system is predicated on the logic you can have limitless growth in a finite world because we had just seen what seemed like a limitless expansion of our ability to do work. The economy was built on the miracle of fossil fuels.

3. International Energy Agency's Annual Report

- The third crisis, factor of the chasm, was the International Energy Agency's (IEA) annual report on the world's energy reserves acknowledges peak oil. As recently as 2005, they had dismissed this notion as a radical fringe idea.
- The change came in 2008 due to the IEA no longer taking the oil producing countries at their word, and instead looking at the production figures of the eight hundred largest oil fields in the world - their historic, present and predicted numbers. What they found was a large number of those had already passed their peak production and the entire world's oil supply was coming very close to peak.
- The IEA estimate for peak oil is the year 2020. Some believe peak oil is now or has already past. Many consider the summer of 2008, when oil was 150 dollars a barrel and they were pumping 86 million barrels a day, to have been the peak. Most energy policy in this country and around the world is based on the premise that within a generation we will be able increase the number of barrels of oil we pump a day to 126 million barrels.

This is the nature of the chasm. It is not to be trifled with or underestimated. This is why the environmental work everyone is doing is so vital.

The Great Leap

The great leap is about replacing our old system with a new sustainable and resilient one.

- Paul Hawken said to the graduating class of Portland last year "civilization needs a new operating system, you are the programmers and we need it in a few decades. We are not talking about a few tweaks to an otherwise sound engine, we need to overhaul the entire thing and rebuild it from scratch." We cannot do it half way, and that is why it is a great leap and not a bunch of short hops.

- The leap is more cognitive than it is technological. It is about understanding that there is a brand new bottom line. This bottom line is not a goal to one day reach but has to be the basis for what we do from now on.
  The name for this is sustainability, defined as "a life style designed for permanence," by E.F. Schumacher in *Small is Beautiful*. This is what he deemed the proper goal for an economy that cares about humanity and its future.
- The comfortable train that is hurtling down the track right now signifies the enormously abundant and comfortable lifestyle we have built designed for impermanence. It rewards impermanence over permanence. It says to use non renewable resources over renewable ones, use things once and throw them away. That is the lifestyle of impermanence we have to reverse.

- Resilience is the capacity of an ecosystem to tolerate disturbance without collapsing into a qualitatively different state. For example, when the pH falls to 8, it moves beyond the resilience of the coral reefs. Coral reefs have a resilience of .2. This has not been our strong suite so far, we need to build systems and cities with more resilience.

The good news, we already have the tools, they are readily available and lead to a better place. We can build your brightest possible future. This works to enhance the bottom line and quality of life.

Clean Energy Policy

First leap is the leap into Clean Energy Policy. We can look at examples of renewable energy, such as the solar towers powered by steam, and examine what sustainability looks like.

- One example is the case of a Maytag factory in Newton, Iowa deserted when Maytag was bought out by Whirlpool. The factory now makes wind turbines, and half the jobs lost with the closing of Maytag have now been brought back as more sustainable, 'green collar' jobs.
- The Green Energy Act passed by Ontario's provincial government last year is one of the best pieces of green tech legislation in North America. The Green Energy Act is a
  feed-in tariff, copied from a piece of German legislation that was passed in 2000.
- In Germany, this legislation has had great impact over the past ten years. On the landscape you will see solar panels and wind turbines occupying most free space.

This has led to new factories and new jobs. This is not because Germany was so sunny or windy but because the legislation was so good.

- Germany is now driving the next generation of solar, and created a quarter of a million green collar jobs directly because of the feed in tariff, and forty billion dollars a year in revenue. This is taking place in the former centre of the East German chemical plants, once considered one of the worst places in Europe to live. Now it is the centre of 'solar valley'. It has convinced this community it has a future.

- Germany will produce thirty percent of its energy from renewable sources by 2020, and is meeting its Kyoto targets. This does not cost tax payers any more, but is instead financed by increasing power bills. This "pay by use" funding method leads to a much more even distribution of that cost. On average, power bills of the average German is fifty dollars more a year than it was when renewables were not a big part of the electricity mix. This is what Germans are paying to be at the forefront of this new economy.
- There is this perception that a modern industrial economy cannot be entirely powered by solar panels. This perception was challenged by a group of German engineers who tested what a group linked of renewable power plants which use wind, solar, hydro, and waste energy sources, could do in terms of providing a steady stream of power. The actual output was linked together at one tenth the scale of the national grid. They discovered that there were no technological hurdles to ensuring a steady stream of renewable energy to power
- One final example of clean energy policies is a townhouse development in Germany. Each unit over of the course of the year produces more energy than it uses. Each house then makes a net profit of four thousand dollars a year by selling back excess power.

Urban Design

The second leap is the leap into urban design. The key to using less energy is correct urban design. We have been doing this incorrectly for a long time. The only future for a modern city is a major investment in public transit. We need to look at what we can do even without provincial and federal support for this.

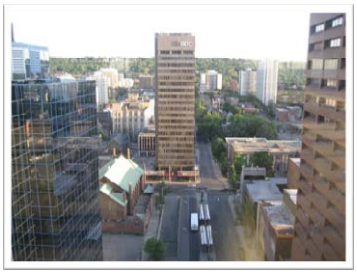
- Over the past fifty years, every municipality has made its stated goal of transportation and planning policy to build highways as the primary way of getting around cities. The automobile seemed like such a great thing when it arrived, we could get around quickly, and so we needed more space, more roads, and shopping malls out on the edge of city centres. But what we did was put cars ahead of people in the planning process and value private space over public space.

- Automobiles should not be the number one priority of urban planning in the twenty first century.
- A great example of planning for people is Copenhagen, Denmark where thirty six percent of people commute by bike, and fifty five percent of downtown residents commute by bike.
- In the 1960's, Copenhagen was completely choked with cars, and they considered banning bikes because they were getting in the way. Instead they went the other way. The great leap they made was to close off a street in the centre of town to cars and made it a pedestrian destination. Then they started to build bike lanes with barriers and specific lights to protect cyclists.
- "Cultures and climates differ all over the world, but people are the same. They will gather in public if you give them a great space to do it."

Other examples of successful urban design:

Melbourne, Australia

- Fed Square in the centre of Melbourne is the new flagship square they built at the end of their redevelopment process. They brought in Copenhagen experts to address their empty, soulless downtown. They began in the 1980's, and twenty years later have a fundamentally different city. There has been a massive increase in the number of people living and working downtown.
- The real success story of Melbourne was they looked at what resources they already had but that were not using. They realized this was the wide lanes all through the city, with alley's accessing buildings. The city passed a simple ordinance that the alleys had to be opened to retail/commercial space. What has happened is inside a generation those lane ways have become the heart and soul of Melbourne. This is where people meet for lunch, do a lot of their shopping, and make great use of the space.



New York City, New York

- So they went ahead and closed Broadway Avenue from Harold Square to Central Park and created a beautiful pedestrian promenade. Prior to this 89% of the surface area of Times Square was for automobiles. The other 11% had to house 300 000 pedestrians a day. Once this was changed, people made great use of the space.
- The best part, from a municipal point of view, was the cost of this transformation was only 1.5 million dollars. Overnight it turned Times Square from a

traffic choked nuisance to truly the crossroads of the world. By using things like paint and planters they have built these spaces, and seen a 35% increase in bike commuting in the past three years.

Lakewood, Suburb of Denver, Colorado

- Villa Italia was the grandest shopping mall of the west and people used to come from five states to shop there. It was built in the 1960's but by the 1990's it was dying. It became a giant eyesore in the centre of Lakewood. The business as usual approach would have been to get new developers in, punch in some skylights, paint it, and rename it if possible. What they did in Lakewood instead was take this space and reconfigured it as a city built on a human scale, with multiuse buildings for living, working and playing in the same place and a central plaza that becomes a skating rink in the winter.

- In order to create this, they had a couple of billion dollars in investment, to rewrite the municipal tax code, finance it, and have multiple stakeholders' consultations over rebuilding the entire downtown. What nearly derailed it was parking. A faction of the city council said you cannot charge for parking. They believed it would be the death of the development - it was "un-suburban." If people had to pay to park there they thought no one would come. As it turns out, if you build great public spaces, people will use them and it will change the way the whole city is organized. They now even hold a farmers market there in suburban Denver.

Conclusion

The final message of the day: "None of this was possible until someone made it so. All the tools are there, pick them up and use them. You can get very far down the road, even before you spend any money, if you come at it from the right point of view."

2010 Inter-Governmental Declaration[9]

- Each year the GTA-CAC develops its work plan in the form of the GTA-CAC Inter-governmental Declaration on Clean Air. The Declaration outlines the priority actions for research, collaboration and implementation for the GTA-CAC.

Interim Progress Report on 2008 and 2009 Declaration and GTA-CAC Recognition Certificate

Each year at the Summit the GTA-CAC reports on the progress on Declaration actions.

Article 4 provides and Interim Report on the GTA-CAC's progress on the 2008 and 2009 Declaration actions. [10]

GTA-CAC jurisdictions were presented with Recognition Certificates[11] outlining the actions their jurisdiction has achieved.

David Buckland, Keynote Speaker, Cape Farewell

Video: Cape Farewell[12]

- Cape Farewell was created by artist David Buckland in 2001. The organization brings together a coalition of artists, scientists, youth and educators who take expeditions to the Arctic, and engage in the climate change issue. The hope is that the artists who join them in the Arctic will be inspired to respond creatively to the challenge of climate change.
- Cape Farewell seeks to create new platforms for engaging the public, and diversifying the way the public

[9] Available at: www.cleanairpartnership.org/files/2010%20InterGovernmental%20Declaration%20Final.pdf
[10] Available at: www.cleanairpartnership.org/files/Declaration%20Article%204%20May%2028%202010%20Final.pdf
[11] Certificates available at: www.cleanairpartnership.org/files/june%202010%20interim%20recognition%20certificates%20final.pdf
[12] Video available at: **: http://ca.video.yahoo.com/watch/7861783/20834660**

receives the message on climate change. By incorporating the use of images, songs, and stories, in addition to the data and reports created from the scientific community, they aim to reach out to a larger audience in raising awareness.

As a result of the expeditions, many pieces of work have been created such as:

- Lemn Sissay's poem What If?[13]
- David Buckland produced film, Art from a Changing Arctic[14]
- KT Tunstall's song Ummannaq[15]
- Ian McEwan's recent novel Solar[16]
- More artwork, resources and information on Cape Farewell can be found on the website www.capefarewell.com

[13] Available at: http://www.darwinoriginals.co.uk/LS_Video.html
[14] Available at: http://www.snagfilms.com/films/watch/art_from_the_arctic/?utm_source=www.cactusthree.com&utm_medium=referral&utm_campaign=referral
[15] Video available at: http://www.youtube.com/watch?v=hXuHuB4mvS0
[16] Available at: http://www.ianmcewan.com/bib/books/solar.html