

Sustainable Development in Communities Workshop – Closing Plenary

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Good afternoon

I'd like to speak on three topics today:

- We've come a long way;
- We ain't seen nothing yet;
- Beware of enemies in friends clothing.

1. We've Come a Long Way:

In 2003, working through the Canadian Energy Efficiency Alliance (CEEA), I was involved in a number of Energy Summits that looked at future energy supply in Ontario. This effort resulted in a discussion paper on conservation and demand management, which was sent to the Province.

Through those efforts, we:

- Developed a broad definition of conservation;
- Identified that the Province needs to lead by example with in-house energy savings;
- Suggested training and education on energy conservation curriculum be developed
- Identified codes and standards changes; and,
- Dealt with such things as smart meters, smart networks and renewables to make the plan more robust.

Operationalizing the plan is now the great challenge.

2. You Ain't Seen Nothing Yet:

Although we've accomplished a lot, there is much still to do.

- Planning Act; some changes have been made, still more to do.
- Need to better integrate energy supply with the end-use of energy (e.g. distributed energy)
- Need to understand and plan for energy better, and not solely rely on the grid.

Concerning efficient building:

- The Green Building Initiative is good, with their head office located at the Kortright Centre here in the GTA;
- The Canada Rebuilding Center is now in its 5th year.

Beyond design, we also need to look at building commissioning, re-commissioning and testing of building performance. A recent study of new schools showed a 4 to 1 ratio in actual energy performance. The sample included “Code-built” buildings and “CBIP buildings” (Commercial Building Incentive Program - designed with a minimum 25% improvement in energy performance compared to the Model National Energy Code for Buildings (MNECB)). The four to one ratio of energy consumption performance did not correlate with the design values or whether the building was a basic code design or the more efficient CBIP design. This needs to be rectified. Property management companies are taking leadership here, and the Canadian Building Council is developing an accountability framework.

Building improvements are not necessarily expensive propositions. For example at Harvard University they have built a LEED Platinum qualified building at a lower capital cost than a conventional building.

3. Beware of Enemies Dressed in Friend’s Clothing

For the most part these are non-intentional enemies of efficiency and sustainable development.

For example:

- History, status quo, minded sets and rules-of-thumb;
- Zoning issues;
- Pseudo competition.

Rules of thumb: Historically there is a rule-of-thumb that suggests it takes 1.1 kW of installed chiller capacity to produce one ton of cooling. A recent installation at Humber College reduced this value to 0.4 kW per ton of cooling, using something called the “Hartman Loop”. This is a tremendous improvement.

Zoning regulations: Current zoning regulations can be used to restrict the installation of photovoltaics on buildings (i.e. needs to be zoned as a power generator), and acts as a barrier to the introduction of this sustainable technology. These types of artificial barriers need to be removed.

Pseudo competition: Sometimes we see several renewables companies competing very hard against each other in the marketplace, when the real competition is the status quo, or conventional way of delivering energy. We need to find ways of stepping back and seeing the big picture.

Thank you for your attention