



Tapping
the Future

2014

CONFERENCE
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CSC Conference 2014 – TAPPING THE FUTURE
Kitchener, Crowne Plaza Kitchener/Waterloo
May 21-25, 2014

Session 8B
Date May 23, 2014
Time 3:30 – 4:30
Speaker John Carpenter

Meeting the GREEN Challenge: Prepare for the future with LEED Glass Façade Designs

1. Why prepare for the future:

a. **FACTS: Current Atmospheric Co₂ levels have reached 389 ppm***

- The building sector is the largest emitter of greenhouse gases, the single leading contributor to anthropogenic (human forcing) climate change*
- Buildings consume nearly seventy six percent (75.7%) of all the electricity produced; most of the energy is produced from burning fossil fuels
- We have 30 years to avoid the point of no return - 450 ppm Co₂ *

*Architecture 2030 Climate Change Report 2012: <http://architecture2030.org/>

b. **FACTS: Supply and demand****

- China will be the world's biggest economy by 2030**
- Energy prices will continue to increase**

**BP Energy Outlook 2030:

<http://www.bp.com/extendedsectiongenericarticle.do?categoryId=9048887&contentId=7082549>

2. How to prepare for the future:

- Embrace the enduring power of the **sun** with LEED Glass Façade Designs
- Control the **building envelop**:



- **Daylighting**
- **Heating**
- **Cooling**
- Improve **Occupant Productivity** (wellbeing)
- Reduce OPEX and CAPEX values
- Provide building designs with 0% emissions Co2

3. Learn how Static and Dynamic IG Units will help CSC specialists to prepare for the future:

Static: IG Units with Interlayers (woods, metals, acrylics and gels)

Dynamic: IG Units with Electrochromic “On Demand” transition controls

4. Compare:

Evaluate new OPEX and CAPEX Studies between traditional and new dynamic glass façade advancements.

5. Assess:

Evaluate new computer energy modeling programs for glass facades and ASHRAE 90.1 requirements

6. Judge:

Traditional architectural glass building design components with new Carbon Neutral architectural glass building design components; Architecture 2030

7. Occupant Wellbeing:

Review new studies. Learn how building occupant productivity values and satisfaction values improve when new LEED Daylighting techniques are introduced - Herzog Mahon Report, US Dept of Energy – California



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FACTS: To be successful, Sustainable Design prerequisites will become THE core feature for future building designs. Example:

- Vancouver to become the world's greenest city by 2020; all new building must be LEED Gold certified
- Seattle WA delineates the first carbon neutral high performance building district in the US; all buildings carbon neutral

Speaker Bio:

John Carpenter, President ClearStream Architectural; johnc@clearstreamarchitectural.com

John Carpenter has developed a highly regarded reputation within the Ontario Architectural community.

- Visited over 500 OAA member architectural firms, providing the most up to date, continually evolving - architectural glass sustainable design techniques, as part of the OAA CE Continuing Education program for Structured Learning.
- Delighting the architects by providing problem solving options that focus exclusively on the needs and interests of the architect.

“Your lunch and learn was one of the best presentations delivered at this office and I have seen many over the years, excellent!” - Daina Leja; Librarian HOK Toronto; daina.leja@hok.com, (416) 342-7048 Unsolicited Reference File Excerpt: HOK Toronto

John Carpenter is president and owner of Clearstream Architectural Products Ltd, representing industry leading, high tech architectural glass companies:

- Schott Architectural Glass: <http://www.us.schott.com/architecture/english/index.html>
- VIEW Dynamic Electrochromic Programmable Glass: <http://www.viewglass.com/>
- Ornilux Bird-Friendly Glass: <http://www.ornilux.com/>
- AGC InterEdge Technologies for fire-rated glass: <http://www.firesafe-glass.com/>

Clearstream Architectural provides **new LEED building solutions in an on going** continuing education format.



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- Thermal: programmable, interlayers, curved, oversize, feather friendly, safety, specialty
- Energy Modelling: specification review, optimum performance

John has written Sustainable Design trade articles and been a frequent glass technologies presenter

- National and regional association forums
- Universities
- Trade expos.

Mr. Carpenter has previously operated at the CEO level for several major manufacturing companies in Canada and the USA; **Request information:**

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