



# 12<sup>TH</sup> CANADIAN POLLUTION PREVENTION ROUNDTABLE

June 10-12, 2008  
Edmonton, Alberta

Crowne Plaza- Chateau Lacombe





## **10.3 “Steelcase Canada’s Environmental Leaders Program”**

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**2008 CCME**  
**CANADIAN POLLUTION  
PREVENTION ROUNDTABLE**  
**Edmonton, Alberta**  
**June 11 & 12, 2008**



# Welcome

# Environmental Leader Program

## Introduction



- **Steelcase Canada – Overview**
- **The Leaders Program**
- **Our Plan**
- **Results**

# Steelcase Canada





Steelcase

# Steelcase Canada



- In 1912, Steelcase Inc began operations in Grand Rapids, Michigan.
- Steelcase is the largest producer of office furniture in the world.
- Manufacturing in Canada since 1954
- The Markham, Ont. plant has 720,000 sq. ft.
- Approx. 450 employees
- \$250,000,000 annual sales
- 90% of manufactured products are exported
- Lead-times run 3 to 5 weeks
- 1500 full truckloads shipped annually
- ISO 9001, ISO 14001 and OHSAS 18001 Certified



# Steelcase Canada Products





# Steelcase Canada Products





# Steelcase Canada Products



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# Steelcase Leaders Program



Steelcase was searching for ways to improve our operations in an effort to reduce costs, while improving our environmental foot-print.

Early in 2004, Steelcase began talks with Ontario's Ministry of the Environment regarding their new initiative called the Environmental Leaders Program.

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# Ontario's Environmental Leaders Program



The Environmental Leaders Program is aimed at encouraging Ontario's environmental leaders in industry to commit to reductions of priority substances and significant environmental aspects above and beyond what is required by law.

In return, members of the Program are eligible to benefit from a suite of incentives offered by the Ministry.

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# Steelcase Culture



Steelcase has always had strong environmental programs that focus on waste reduction, recycling and conservation of resources. For example:

- We divert 87% of our total waste for recycling.
- Our products are certified as low emitting products through the *Greenguard* Indoor Air Quality and the *Indoor Advantage* certification systems and meet the Cradle to Cradle design protocols
- Packaging for finished product has options for returnable blanket-wrapping, reusable containers or lightweight cardboard
- Through water reuse and conservation, we have lowered our water consumption rate more than 80% since 2001.
- All business stationary is made of post-consumer recycled paper.

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# The Driving Reason



Steelcase entered into this program to demonstrate our environmental leadership.



It also provided us with a vehicle to improve our efficiency, reduce hazardous waste, lower operating costs and to promote our environmental core values.



The Steelcase logo is positioned in the top left corner of the slide. It features the word "Steelcase" in a white, sans-serif font, set against a background of a blue sky with white clouds.

# The Start

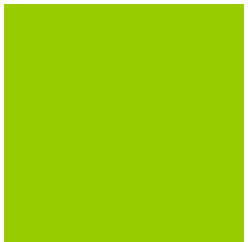


In September 2004, Steelcase Canada enrolled in the program and became the first facility to participate in MOE's - Environmental Leaders Program.



The Steelcase logo is displayed in white text on a blue background with white clouds.

# The Commitment



Steelcase pledged to eliminate smog-producing volatile organic compounds from its painting processes – from nine tonnes in 2003 to zero by 2008.

Steelcase Canada has also pledged to reduce its electricity consumption by 10 per cent by 2008.

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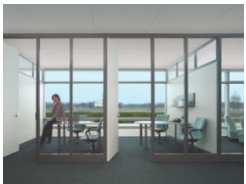
# VOC Emission Elimination



To eliminate our emissions of volatile organic compounds released from the solvent in the liquid paint used in our Paint facility, we switched our process to epoxy powder paint. We chose this process as there are no emissions of any kind from this process.

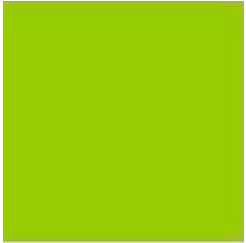


Steelcase offers a wide range of colours. This created a challenge to convert the paint, as products coated in powder paint had to match existing product in the field. We had to retain the colour and texture of the finishes despite the difference in applications.



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# VOC Emission Elimination

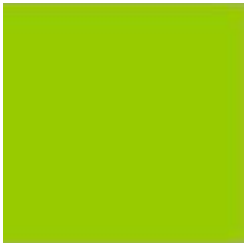


Steelcase accomplished this goal by working with our suppliers to develop new technologies to convert solvent-based painting operations to powder coat finishing. We needed to develop equipment that is appropriate to the size of our products. Booth designs, powder hoppers, powder pumps and spray equipment all had to be created for our facility.

At the same time, we also eliminated all solvents from our adhesives.

The Markham plant's manufacturing processes are now VOC free.

# Electrical Reductions



Reduction in electrical usage would be achieved by implementing various energy conservation measures as recommended in an energy audit.

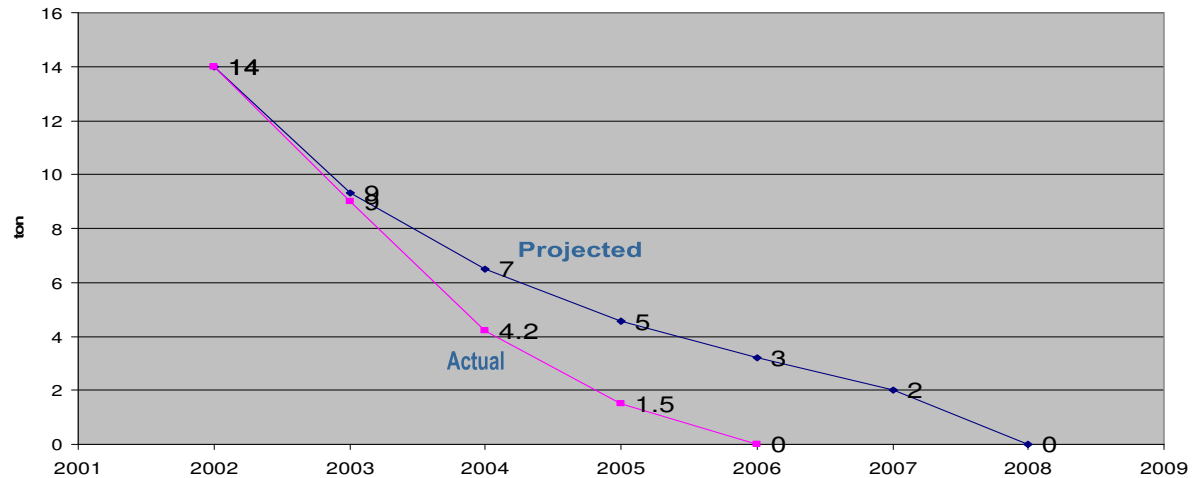
- Replaced 2 inefficient water cooled air conditioning units with 2 air cooled units with timers.
- Replaced all plant 8 foot T12 fluorescent task lights with T8 lights.
- Introduced a program to turn off all equipment when not required to support production.
- Introduced the use of Lean Manufacturing principle to improve product flow and to increase machine utilization and reduce equipment.

## Paint Conversion

All solvent-based paint booths were removed as of September 2005.



Steelcase Liquid Paint Related VOC Emission  
5-year Reduction Plan  
( 2004 - 2009)



## *Paint Conversion*

Additional benefits to the conversion.

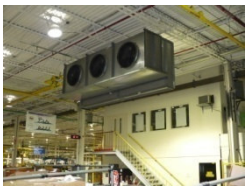
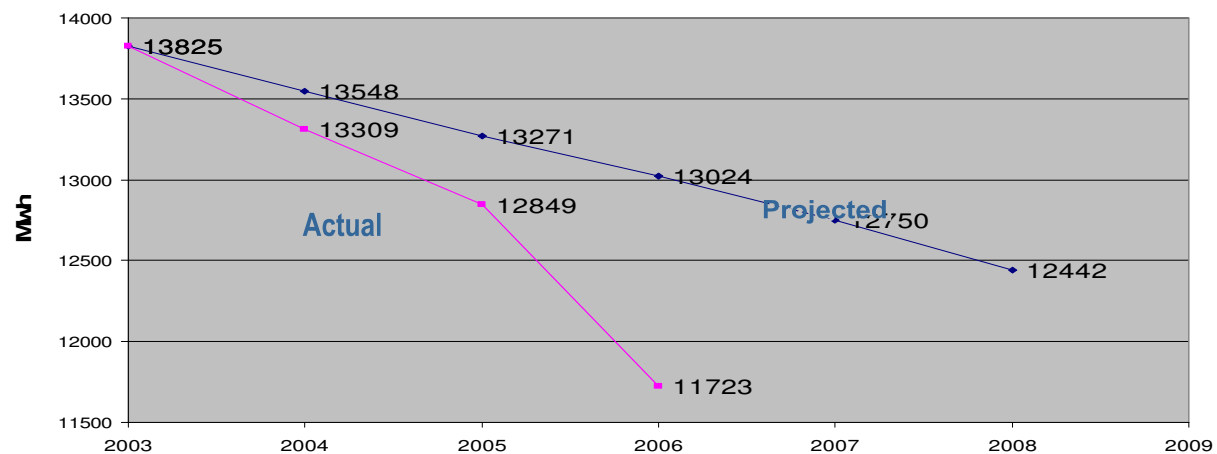
- Stronger finish – improved abrasion resistance
- Electrical savings - spray booths reduction
- Natural gas savings - powder booths are not vented outside
- Reduction in waste - paint filters, process solvents and surplus paint
  - reduced hazardous waste generation by 63%
- Reduction in maintenance costs - elimination of mixing equipment and pumps
- Reduction in insurance premiums due to reduction in fire liability
- Cost savings from materials - powder paint is cheaper than liquid paint
- Benefit to sales - our products qualify for LEED credits



## Electrical Reduction

Results achieved on December 31, 2006. Electrical consumption was reduced 15.2%, from 13,825 MWh to 11,723 MWh, enough power to run 150 homes .

**Steelcase Electrical Consumption  
5-year Reduction Plan  
( 2004 - 2009)**





# Questions

thank you

