

APEGBC  
83rd Annual Conference & AGM

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Professional Practice and Sustainability

Presented by:

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From the New York Times Science  
Tuesday, August 20, 2002



MANAGING PLANET EARTH: AN ABUNDANCE OF WARNINGS

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## Engineering Challenge

- Can we change how we do things to help save the environment?

OR

*Status Quo*

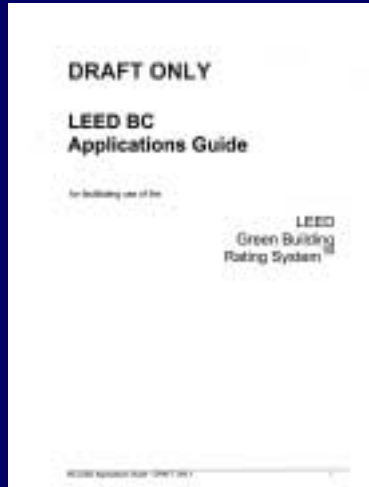
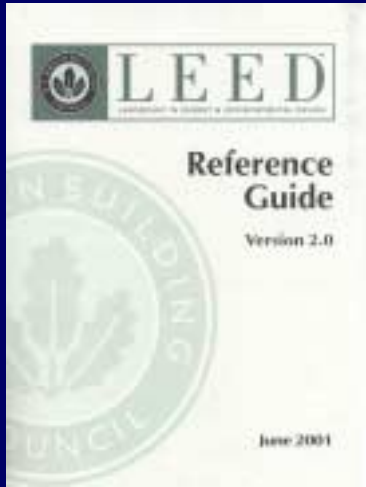
- Keep doing same old thing
- Not enough time/\$ to think or do it differently

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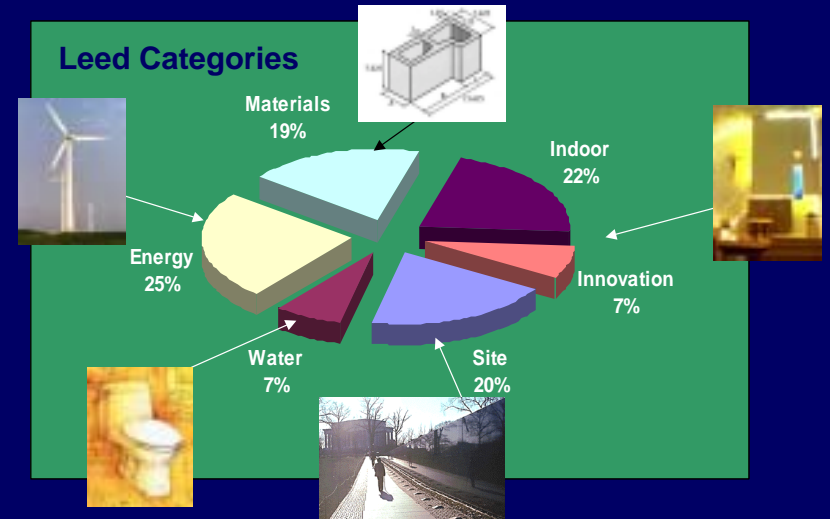
## LEED Rating System

- Leadership in Energy and Environmental Design
- United States Green Building Council
- [www.usgbc.org](http://www.usgbc.org)
- LEED-BC, RAIC/Fed. Government, City of Vancouver, SEFC
- In USA -34 States, 10 Cities, 9 Government Agencies

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## Green Projects

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## ICICS



Architect:  
Hotson Bakker Architects / Bregman & Hamann Architects



## ICICS, University of BC

- Integrated design approach led to:
  - Lowest Capital Cost
  - Lowest Operating Cost
  - Lowest Maintenance Cost



## York University Computer Science Building

- 52% of Canadian Model Energy Code
- Canadian SB 2000 Entry
- 6 months of configuring before drawing drawing any lines
- Built within original conventional building budget
- Seasonal natural ventilation
- Pre-cooled air - underground duct
- Heat reclaimed from campus steam tunnel
- Sod Roof



Architect:  
Busby & Associates / Alliance  
Architects

- Best Green Building of the Year



# Vancouver Island Technology Park LEED Version 2 "GOLD"

First LEED Gold ever in Canada and Third in North America

Architect: Idea Link



## Potable Water Use

6 million litres less water than traditional design

- ❑ Water less urinals
- ❑ Dual Flush Toilets  
6/3 Litre Flush
- ❑ Infra-red sensor sinks  
25% less water
- ❑ Flow restrictors on showers



### Benefits

Less capital & operating costs  
Reduced site infrastructure water & sewer

## Building Reuse — 99.9% structure – 91% Shell Construction Waste — 99% salvaged

Cabinets, toilets, sinks, concrete block, wiring, plaster, copper piping, metal pans etc



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## Puget Sound Learning Center, Washington State

LEED Gold. Almost made Platinum

Third LEED Gold Project in the USA

Architect: MITHUN PARTNERS

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## South Elevation - Learning Centre



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## Solar Collectors - Residence Building



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- Rain Water Collection and Storage



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## Composting Toilet



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## Hydroponic Reactor Tanks



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## C.K. Choi Institute of Asian Research

University of British Columbia



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## CK Choi Features

- Perimeter radiation with self contained control valves
- Natural ventilation - trickle vents, opening windows, summer exhaust fans at top
- Composting toilets
- Grey water and “tea” bio filtered
- Storm water storage for irrigation
- Recycled brick and wood beams

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**“It’s Easy To Be  
Green!”**

