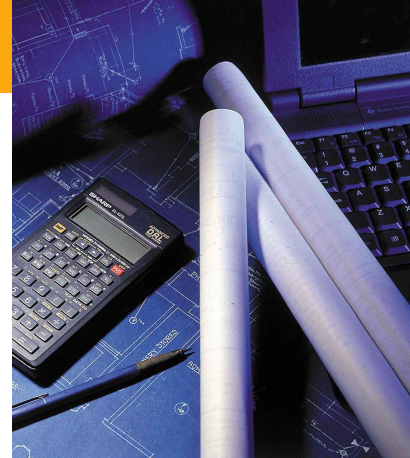


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Quiz

Test your sustainable design know-how. Readers have a chance to win prizes!

- What three groups are essential for efficient inter-disciplinary relations?
 - Nearby landowners, politicians and site construction workers
 - The owner, architects and engineers
 - The owner, the manager and plumbing specialists
 - Architects, engineers and interested bystanders

2. Orchard View Long Term Care Facility in Gagetown, NB met an energy requirement that was what percentage below the Model National Energy Code for Buildings?

- 10
- 30
- 15
- 25

3. What is the most common qualification designation that design professionals can be given by LEED and the Canada Green Building Council (CGBC)?

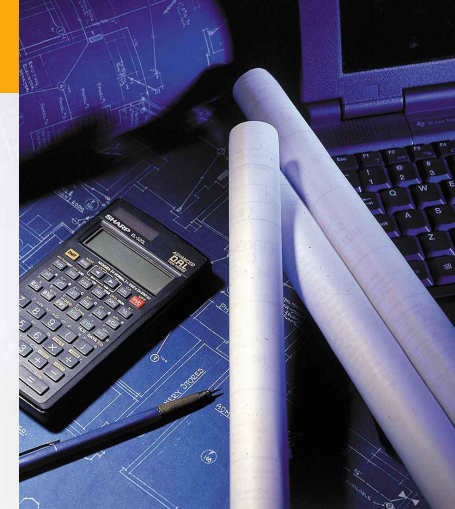
- P. Eng.
- P-Tech.
- AP
- PA

4. By some estimates, what accounts for up to 50% of the world's CO₂ emissions and 50% of global energy use?

- Airplanes
- Buildings
- Cars
- Distilleries



Send your quiz answers to
kac@adi.ca.
The first three correct
answers all win prizes!



INSIDE insight



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Sustainable design leads to savings

Page 2

The integrated design approach

Benefits of sustained design for your projects

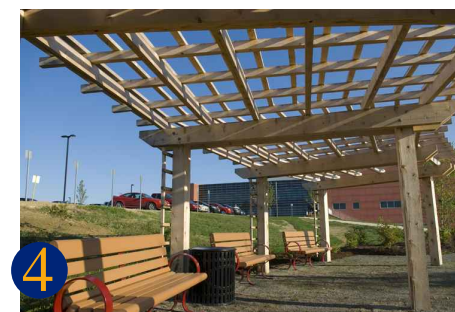
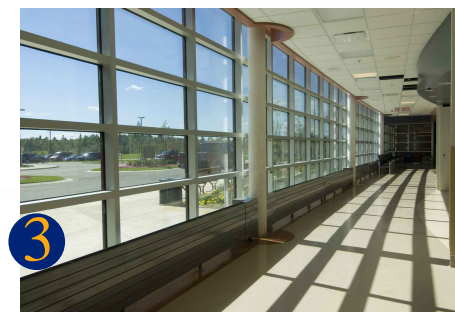
Page 3

Qualified people equals better design

How sustainable design practices differ from past designs

Page 4

Learn anything new? Test your knowledge with this Quiz!



Sustainable design includes economic, social as well as environmental benefits. Increasingly, building owners are interested in quantifying potential energy savings, productivity increases and reducing their environmental impact.

Sustainable design, as you will read in this issue, goes beyond merely savings on your monthly power bill. It integrates the entire design process and maximizes the ecological efficiency of a building or complex. In fact, occupant productivity gains can pay for the capital and operating costs over the life of a building, and studies have shown that patients in green hospitals are discharged three days sooner.

ADI sustainable design accredited professionals have considerable success in assisting clients through the entire process – from planning and design to construction and occupancy. As energy costs continue to escalate, and the public becomes increasingly sensitive to our ecological footprint, ADI is here to assist clients achieve their objectives.

In this issue of *"INSIDE insight"* we explore several ways to approach sustainable design. ADI professionals have experience reducing ecological footprints and maximizing economic benefits using an Integrated Design Team – all housed under one roof. To have ADI experts assist you, begin by calling Kendall Taylor in Halifax at 902.453.5555, Brent Stewart in Fredericton at 506.452.9000 or Jean-Philippe Foisy in Saint John at 506.646.8020.

INTEGRATED COMPANY = INTEGRATED DESIGN

For sustainable design to be effective and have an impact, the design team must have common goals and work in unison. It is essential to have efficient interdisciplinary relations between the owner, architect and engineers for there to be a consolidated effort behind the pursuit of sustainable design.

Traditionally an architect, acting as the design coordinator with the owner, formats a building's size, shape and layout prior to actively engaging an engineering team. In an Integrated Design Process (IDP), the building owner and engineering team are involved from day one - and all three groups establish clear targets. Energy analysis is defined as a key role and not a carryover function from the design process.

The design team will have the philosophy that the project's goals (as well as its restrictions) apply to the whole building, and not just isolated components.

As the largest Architectural and Engineering firm in Atlantic Canada, all housed under one roof, ADI is uniquely qualified to execute the Integrated Design Process. We have expertise in all aspects of building design, energy analysis and site services.



Orchard View Long Term Care Facility



BENEFITS OF SUSTAINABLE DESIGN FOR YOUR PROJECTS

For many building owners, committing to sustainable design is a difficult decision. Few people need to be convinced of the merits of sustainable design in principle, but the practical components of implementing the initiative - what does it involve, what are the costs and what are the direct benefits - are not always as evident.

A reduction in energy consumption - a key objective with today's escalating cost of energy, can be quantified up front. A case in point, *Orchard View Long Term Care Facility* in Gagetown, NB, designed by ADI, met an energy reduction requirement of 25% below the Model National Energy Code for Buildings and received the maximum amount of funding possible under the Commercial Building Incentive Program (CBIP).

ADI successfully completes building designs that decrease traditional environmental impacts. The *Upper River Valley Hospital* in Waterville, NB, *Fredericton East End Convention Centre and Office Complex*, *Bayside Home*, *Barrington Passage*, NS and *Single Quarters Accommodations*, at Base Gagetown, in Oromocto, NB were all designed under Leadership in Energy and Environmental Design (LEED) guidelines. These projects will achieve LEED designation and decrease their environmental impact, while also providing a healthy, productive working environment.

In these projects, the decision process begins in the early stages of programming, conceptual design and cost estimating. All facets of initial cost/savings, design impact and environmental benefits are evaluated at the start of the process.

The benefits of sustainable design can be identified at the first stage of design, while also establishing the standard to achieve and programs to pursue.

Is sustainable design right for your project? That question can be answered in consultation with ADI designers, up front, based on your objectives.



Single Quarters Accommodations



Upper River Valley Hospital



QUALIFIED PEOPLE = BETTER DESIGN

Clients benefit by having the ADI team help them navigate through a sustainable design project. As the demand for sustainable design grows, there has been a parallel increase in the various rating systems: LEED, GreenGlobes, BOMA Go Green, various ASHRAE endeavours, etc. Since all are ways to gauge and measure the success of a sustainable design project, how is a client to determine what is right for them?

Accredited experts at ADI guide clients through the design process by establishing client priorities and following an integrated design process. ADI has LEED accredited professionals on staff across its vast network. ADI architects and engineers have embraced the integrated design process, now part of ADI's design services. Clients receive vital information during the planning stages that help them determine the right approach for them.

In the same manner that buildings or projects can gain recognition for their measure of environmental sensitivity, design professionals can gain recognition and accreditation.

ADI is part of the Canada Green Building Council and have accredited professionals (AP), a designation conferred by LEED, on staff. Clients can rely on ADI experts to know the nuances of sustainable design.

The time to discuss the appropriate approach for each client is up front, before design begins. That way the entire design process has sustainability as a core concept, rather than as an add on, or as an afterthought.

To learn more about sustainable design and sustainable operational practices, simply call any of our offices and we can begin the first steps to guiding you through the process.

Something that could help...

SUSTAINABLE DESIGN PRACTICES DIFFER FROM PAST DESIGNS

Sustainable Design Reduces Environmental Impact and Increases Productivity

By some estimates, buildings account for up to 50% of the world's CO₂ emissions and 50% of global energy use. Sustainable design attempts to reduce this impact.

- Key components of sustainable design are:
- Minimizing disturbance to a site's ecology or maximizing the ecological efficiency of urban development
 - Minimizing water consumption and reducing demand on municipal water and waste water systems
 - Optimizing energy performance and reducing energy consumption
 - Reducing demand on non renewable resources by considerate selection of building materials

Many initiatives are cost neutral; they do not add to typical capital cost, they do not save in energy consumption, but have maintenance and environmental benefits. Reduction of site erosion and control of sediment leaching serve as examples.

Most initiatives have the short term impact of increasing capital cost with long term benefits of reduced energy consumption. Optimizing heating ventilation and cooling systems is characteristic of this scenario.

Upper River Valley Hospital



Some initiatives have short term impacts but convey more subjective benefits. For example reducing light pollution to decrease glow in the night time sky has a beneficial environmental impact and some energy savings.

The *Upper River Valley Hospital*, a new hospital designed by ADI, includes water self sufficiency, use of native species for landscaping, high thermal performance for wall assemblies and efficient use of daylight to reduce artificial lighting. In addition it is a pleasant environment for both staff and patients.

Energy conservation is often a primary focus, however productivity gains can make sustainable buildings unique. Speak to ADI designers about how you can achieve productivity gains through sustainable design.