

Roscoe's rules

Nova Scotia's pre-eminent solar home designer and builder preaches the benefits of solar energy to an ever-increasing flock of converts

"I'm part of a back-to-the-land movement of the '70s," says Don Roscoe, a pioneer solar home designer and builder. "There was an idealism at that time that we could be self-sustaining, and the energy crisis certainly reinforced that. It was that kind of ideal that motivated my work and continues to motivate it."

In the mid '70s, a group of Nova Scotians went to Prince Edward Island to check out the infamous Ark, a government-sponsored "bio-shelter" experiment in sustainable living. They formed Solar Nova Scotia, a not-for-profit organization dedicated to energy conservation and the use of renewable forms of energy.

Around the same time, Roscoe began helping people design and build their own homes, unaware of Solar Nova Scotia. At that time, most houses were owner-built, and the first energy crisis had put a lot of emphasis on energy efficiency, with governments allocating money to develop energy-efficient homes. Near the end of the '70s, Roscoe discovered and joined Solar Nova Scotia, began hiring people to help build, and formed a company called Owner Homes Ltd. He admits that he didn't enjoy running the company because too much of his time was spent managing and organizing people instead of doing what he does best: designing and building homes. Three years later, Roscoe sold out to his partner and left with a couple of guys. "I basically said, from here on in everybody is self-employed," he says, "and we work directly for the client."

Roscoe went from running one crew to running four at one point, and his national presence through the Solar Energy Society of Canada Inc. attracted the attention of the editors at *Harrowsmith* magazine, who wanted to publish an article about one of his solar houses. Instead of doing the typical story on the homeowner, designer, and builder, however, Roscoe wanted the emphasis to be on the design principles. "I suggested to them some of the principles we use when designing a house," he says, "and why don't we show a good solar site, a bad solar site, and a mediocre solar site, so that the principles don't get lost in the story of one house?"

That article, which ran in 1988, became the birthplace of

"Roscoe's rules," a veritable scripture of solar home design. Roscoe exemplifies the rules in his solar shelter course, which he teaches at various institutions throughout the Maritimes. In the midst of this notoriety, he decided to develop a computer-generated house-plan service, complete with construction manuals.

While not a complete disaster, the service didn't quite achieve what he had intended it to do. "At that time, we were so unconventional in the design and the construction methodology that people would modify the house plans and send

me the money, and I would send the money back saying, I'm not putting my name on that," says Roscoe. "The contractors ignored the construction manuals, and they'd get halfway through the house and I'd get a panicked phone call from them saying, what am I supposed to do here? I'd say, look at page one in the manual, and they'd say, 'Oh, that's why you wanted it done that way.'"

Despite that setback, Roscoe continued innovating, with work on lean-to greenhouses. He discovered that people who were interested in growing plants created a demand for solariums and solar greenhouses. The dynamics of greenhouses presented him with a great opportunity in his quest for even more

energy-efficient homes. "In hindsight," he says, "that was actually the perfect tool to evolve a climate-controlled system." Roscoe emphasizes his debt to those dedicated clients who monitored their greenhouses and did various experiments with them. "Over time," he says, "we learned how to control the climate in a greenhouse, so that it would never go to freezing with no heat put into it, by just running a fan."

The realization was that if it could be done with greenhouses, it could be done with houses. The only way that using solar energy made economic sense, however, was to use what already was inherently part of the building. Roscoe and his crews use the same wood, glass, and concrete as in conventional houses; the materials are just designed and put together differently. "My crews and I take a basic idea onto a construction site and work and rework it," he says. "Over a period of time, we evolve a relatively efficient

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— Don Roscoe



Caption

construction methodology that allows us to do solar houses at almost the same cost as conventional houses.”

Roscoe’s clients range in age, ideology, and income. Because of his high profile through his solar courses, he doesn’t spend a lot of energy looking for customers. Instead, they come to him. “I get to choose my client,” he says. “But for both my crews and me, this is not a matter of making money or punching a time clock. The idea is to do something you believe in and make life interesting.”

Roscoe admits that some of his more interesting projects are provided by those with the money to afford them, but that seems to be a necessary concession to advance the technology and in the end allow for affordable and self-sustaining homes. By the end of the ’70s, when the fear of oil shortages subsided, interest in alternative energy sources waned. Today, however, the availability of energy and its environmental impact is driving the sustainable energy industry. Roscoe will continue to champion innovative ways of using this energy, but his genuine commitment to its continued development seems to be a shield against the sway of market pressure. “Unfortunately,” he says, “today’s market is based on yesterday’s decisions instead of being one that looks to the future.”

Quoting the CBC’s fictional television character Red Green, the amiable everyman’s handyman, Roscoe says, “We’re all in this together,” and then makes a case for everyone to help find practical solutions to energy problems. Roscoe says the biggest obstacle in Nova Scotia is breaking with convention. “In a lot of cases, convention is good, but we’ve got to get beyond it,” he says. “It’s a new world, and there are going to be new ideas. We’re an innovative, creative society. I really believe that Canadians are in a unique situation now, and we have a different sense of collective well-being. It’s part of our culture.” — JOE FITZGERALD