

## **Cooling RIT**

Bill Destler, President

Let's start with some indisputable facts: First, increased CO<sub>2</sub> concentrations in a planet's atmosphere will, other factors held constant, increase that planet's surface temperature. Venus is a good example. Second, the Earth is not a hollow sphere filled with oil or any other valuable natural resource. Even if one does not consider global warming to be an imminent threat, it is clear that the human race cannot continue to consume non-renewable resources at the current rate and sustain anything like the current world population (which, by the way, is still growing rapidly) at the current average standard of living.

So we must work, community by community, to adopt more environmentally responsible practices and reduce both our consumption of non-renewable resources and our production of greenhouse gases.

Now, Colleges and universities like RIT are actually self-contained communities of significant size. RIT, for example, is a community of more than 20,000 faculty, staff, and students, and as such, we have both the opportunity and obligation to be environmentally responsible in our operations and in our consumption practices.

So what is RIT doing to work toward a more sustainable future for planet Earth? Let's start with campus efforts to reduce greenhouse gas emissions:

RIT has invested \$38M in a complete overhaul of our utility infrastructure, to be completed this Fall, to reduce fuel consumption. We have replaced 30 boilers with 5, and replaced all of the heating and cooling lines connecting the campus with much more efficient equipment. We estimate that the reduction in fuel consumption at RIT will be reduced significantly as a result.

For its energy needs, RIT now consumes only electricity and natural gas. One third of our electricity comes from hydro and nuclear sources. Natural gas is used because it produces significantly less greenhouse gas emissions per energy unit than does oil or coal. We have also begun to employ solar power collectors for on-site heat and electricity production.

All of our new buildings are built to at least LEED-Silver standards and boast high efficiency features including:

Building Automation Systems (BAS) to assist with energy monitoring;

Space Occupancy Motion sensors to decrease energy usage after operating hours;

Improved design glazing and windows to increase efficiency and thermal properties;

Improved insulation and thermal properties of all building envelopes;

Improved roof insulation;

Temperatures in heating loops are automatically adjusted in response to changes in weather conditions.

RIT's existing buildings have been upgraded to increase energy efficiency via the following actions:

Replaced low efficiency incandescent lights with high efficiency fluorescent lights and light ballasts;

Installed over 300 Variable Speed Drives to reduce electrical consumption of large electric motors;

Installed an energy recovery system to lower energy demand of buildings;

Implemented daylight harvesting in several buildings;

Exit lights were converted to LED or compact fluorescent;

Converted shower heads to more efficient water saving devices;

Upgraded Campus walkways with high efficiency lights.

The University added 'floating holidays' that allow a significant reduction of energy consumption during times when RIT is closed.

And RIT implemented an energy policy with the goal of maintaining nationally recommended temperature standards of approximately 68 degrees in the heating season and 75 degrees in the cooling season in all of our classrooms and offices.

In RIT's dining operations:

A farming vendor has been contracted to pick up pre-consumer vegetable scraps twice weekly to return to their farm for composting. We anticipate providing 55 tons of vegetable scraps annually, which will be saved from entering a landfill;

All of our used frying oil from our dining facilities (about 30,000 pounds annually) will be sold to a vendor to be refined and reused, mainly for bio-diesel fuel;

One of our dining halls went trayless this summer. Food waste is down approximately 30% and we are using less water and chemicals than in past years since trays have been eliminated from the washing cycle;

Unbleached napkins are used in all of our dining units. A mug program has been put into place which allows customers a discount on a beverage if they provide their own reusable mug. In addition, washing systems have been converted to a detergent that uses bisodium carbonate (baking soda) as its main ingredient;

Local produce is served whenever it is in season and available in bulk quantities. Dining Services uses local producers for its ice cream, eggs, yogurt and milk, as well as local bakery DiPaolo's for sub rolls and an Albany producer for other bread.

In the area of recycling:

RIT currently recycles approximately 2,000 tons of waste each year. In 2007, 38.5% of all waste produced on campus was recycled.

The Recycling Department has set a goal of recycling over 50% of the waste that leaves the campus. When met, this goal will place RIT's recycling program among the top schools nationwide.

RIT participates in the Recyclemania program. With over 400 participants, Recyclemania is a nationwide competition between colleges and universities to achieve the highest reuse and recycling results for their campus community. Locally, RIT competes with the University of Rochester, Roberts Wesleyan, Brockport, Monroe Community College, and St. John Fisher. In 2008, RIT ranked #1 in New York in three categories: the largest amount of recyclables per person, the largest amount of total recyclables, and the highest recycling rate.

In the area of transportation:

RIT has implemented new parking regulations to encourage carpooling by faculty, staff, and students, and bicycle use by those living close to campus.

RIT has an extensive green vehicle program. Almost all new vehicles in our fleet are either hybrid or alternative fuel vehicles. RIT has a hydrogen fueling station on campus, and operates a number of hydrogen fueled vehicles which produce no greenhouse gases at all.

On the educational side:

RIT offers a number of unique programs in the areas of sustainability and environmental science and management, including the first Ph.D. program in the world centered on Sustainable Manufacturing and Production;

RIT conducts world-leading research programs in such areas as remanufacturing, renewable energy sources, and sustainable transportation;

And finally, last Spring I signed the College and University Presidents Climate Commitment, which obligates RIT to move aggressively toward the goal of carbon neutral operations.

We can, and must, do more, and I am confident that my wife, Rebecca Johnson, will continue to push all of us at RIT toward a more sustainable future as she has done over the last two years. I congratulate all those associated with the Cool Rochester Program for your efforts to encourage our community to work toward the same goals. Thank you very much for the invitation to speak with you today.