

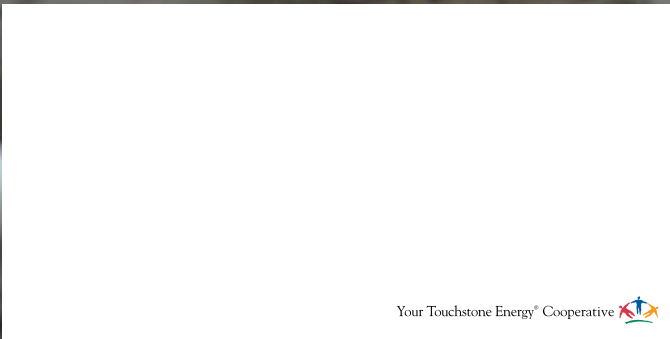
The pride of North Carolina's electric cooperatives

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Carolina country



To Everything, There Is a Season



INSIDE:
Building power for people
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RESPONSIBILITY 101



Text and photos by James Aldridge

Sensible energy use and environmental protection are taught throughout Carrboro High School

Photos (top left to right): The Carrboro High School parking lot reserves prime spaces for alternative fuel vehicles. Solar energy pre-heats hot water, and photovoltaic panels provide electricity to run some equipment inside. Natural light in the "Café Commons," as well as classrooms and the gym, lend to a pleasant daily experience and are supplemented by fluorescent lighting on rainy days and at night.

We all know that an effective way to teach young people is to set a good example. When it comes to teaching them to respect our natural resources, to use them carefully and to avoid wasting them, we can show our children good examples at home every day.

We also can show them good examples at school every day.

Carrboro High School in Orange County is a model for demonstrating to students, teachers, staff and visitors how a large gathering of people in a large building every day can apply sensible energy use and respect for our natural environment.

Piedmont Electric Membership Corporation, the Touchstone Energy cooperative based in Hillsborough, proudly includes among its member accounts Carrboro High School, the newest school in the Chapel Hill-Carrboro City School System. The school opened its doors to students on Aug. 23, 2007. Students filed into the building that day just as they did in schools all across the state. The freshmen I greeted in my English class had the same excitement and apprehension as all of North Carolina's other ninth graders.

But these young "Jaguars" may not have noticed at first just how different their new school is.

The building was designed according to the school district's "High Performance Building Design Criteria" policy, which emphasizes energy conservation, water reduction, high efficiency lighting and positive indoor air quality. The result is a state-of-the-art "green" school that is both cost effective and energy efficient without sacrificing the needs or comfort of students and teachers.

Carrboro High School hosts a number of environmentally friendly features. Three cisterns, each holding 35,000 gallons, collect filtered rainwater for use in toilets. Overflow from these cisterns and other rainwater is collected in retention ponds and is used to water athletic fields. This will save an estimated 1.25 million gallons of potable water per year.

Classrooms, the gymnasium, the media center and the "Café Commons" feature large windows that provide ample natural light. Fluorescent lights supplement the natural light on rainy days and at night. Occupancy sensors in classrooms automatically turn off these lights if no one is in the room.



The roof of the building has an Energy Star compliant, highly reflective membrane that helps keep the building cool. This also helps to avoid the “heat-island effect” that can damage surrounding vegetation.

Solar energy is used to pre-heat hot water, and photovoltaic panels provide electricity to run some of the motors in the mechanical room.

The building’s doors were manufactured using wood from forests that are managed and protected. Many of the materials used in construction came from recycled products, including the drywall, carpet and furniture.

In an effort to reduce emissions during the building phase, 20 percent of construction materials were extracted or produced regionally, and tons of rock from the site were ground up and used underneath the asphalt parking lots. While the school was being built, a construction waste diversion system was put in place to recycle or reuse 30 to 60 percent of all construction waste materials.

The school’s commitment to the environment even extends to the

parking lot where prime parking spots are reserved for alternative fuel vehicles.

The 148,000-square-foot school was designed by Moseley Architects and has been registered with the U.S. Green Building Council as a LEED project (Leadership in Energy and Environmental Design). The U.S. Green Building Council is a non-profit organization that seeks to “promote environmentally responsible, profitable and healthy places to live and work.” So far, there is only one other LEED-certified school in North Carolina, Third Creek Elementary School in Statesville, also designed by Moseley Architects.

Conducive to learning and pride

I once thought that, in order to be environmentally responsible, we have to sacrifice some measure of performance or comfort. After teaching in the building for just a few weeks, it was clear to me that the school is as conducive to student learning as any school should be. The “green” features almost go unnoticed. The natural lighting in the classrooms is sufficient and actually more pleasing than artificial light.

The energy-efficient cooling system has kept the building at a comfortable temperature even through some sweltering 90-degree days. By designing the building for optimum efficiency, Moseley Architects states that the emissions saved by Carrboro High School “is the equivalent of 1,638,000 vehicle miles traveled per year.”

As a teacher, I am proud to work in a district that acknowledges the importance of environmental stewardship and is taking steps toward building a more sustainable community. I feel confident that, in terms of taking care of the environment, we practice what we preach. The impact of Carrboro High School, beyond the environmental benefits, beyond the long-term economic savings, beyond providing students with an excellent education, will be providing proof that environmental responsibility is an attainable reality that only requires commitment, not sacrifice. 🗣️

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