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YMCA buildings should be green as can be

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Buildings generate almost 40 percent of the greenhouse gas emissions produced in the United States. Constructing new buildings with low or zero net emissions is therefore extremely important. New YMCAs are planned for Bethel and south Eugene, and they will have a high profile in town. As a longtime Y member, I decided to investigate how those facilities could address this need.

My first step was to look for YMCAs and other buildings that aim for net zero energy use. The YMCA Storer Camp in Jackson, Mich., is one. It serves 20,000 kids and adults annually from Ohio, Michigan and Indiana. Program manager Glen King told me that when he took over the 1,200-acre camp in 1997, he decided to “make the place real green.” Improvements have been made in stages, reflecting the organization’s ability to raise funds and the ups and downs of the economy.

Phase I included a new 450-seat dining hall that generates all of its energy from a 10-kilowatt solar system and a geothermal device. Phase II included a “Net Zero Model” Prototype Lodge that includes a renewable energy classroom.

Storer Camp is now in Phase III, which includes making all buildings as energy efficient as possible through LED lighting and other advanced measures. Additional solar and wind power generation will make it the first “net zero” YMCA camp of its kind. Energy-efficient cars, trucks and buses will replace the old fleet.

In keeping with the organization's mission, every student and guest will be educated about renewable energy technologies. They will also compete to see which lodge consumes the least energy.

Donations and a power purchase agreement with an energy services company have funded the work. CGE Energy owns, operates and maintains the energy upgrades, and the camp purchases discounted electricity from CGE. The camp gets electricity at a stable cost without upfront costs.

These seem like options the new Eugene YMCAs could investigate.

I also examined the new Bullitt Center in downtown Seattle, which bills itself as "The world's greenest commercial building." Manager Brad Kahn told me the six-story, 50,000-square-foot building was designed to prove that commercial buildings can operate without fossil fuels and achieve net-zero energy use.

It accomplished that goal — and more. The 575 solar panels mounted on the roof generate more energy than the building uses. The excess is sold to Seattle's municipal utility through a net metering agreement. In April, that was equivalent to the electricity used by 50 households in one month.

Energy efficiency is also a top priority. Extensive natural day-lighting and ventilation systems cut energy use from overhead lights and are much healthier for tenants. The utility pays the Bullitt Center for "negawatts," which are electrons it does not use because the building is way more energy efficient than code requires. As with the Storer Camp, education is part of the Bullitt Center's mission. It continually shows the building's energy production and consumption in the lobby and on the Internet. Tenants are given an energy budget based on the percentage of the building they occupy. Tenants that stay within their budget pay nothing for electricity. Those that use more pay more.

The building also eliminated 362 poisonous materials typically found in commercial buildings, such as brass pipes that leak lead into drinking water.

In addition, it was designed with the effects of climate change in mind. For example, because warmer temperatures will reduce snowpack and diminish water supplies, waterless composting toilets were installed. Rainwater is collected in a 56,000-gallon cistern and used for drinking water, cooling and heating.

Can the new Eugene Ys adopt these types of innovations? It certainly seems consistent with its mission of “building a healthy spirit, mind, and body for all” to eliminate the poisonous materials identified by the Bullitt Center, and to educate members about the buildings’ real-time energy use and emissions. Perhaps the Y could even investigate ways to charge members for the amount of energy they use above a baseline.

Most importantly, with civilization-altering climate change now a real possibility, aiming for net zero energy seems fundamental to ensuring future health and well being for all. Some of the design elements of the two facilities are today likely too expensive for Eugene’s new Ys. But as Glen King told me, “The bigger the dream, the more dollars you attract.”

Maybe seeking to become net zero energy Ys will attract previously unimagined sources of funds. As with the Storer Camp, changes could then be phased in over time. That might spur other YMCAs, and all new commercial buildings in Lane County and elsewhere, to aim for zero net energy use.

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