

November, 2009

BCD update on green building

The Department of Consumer and Business Services, Building Codes Division (BCD) supports cities and counties in their efforts toward more 'green' and sustainable development. As the administrator of the state building codes, BCD is helping local jurisdictions learn more about green building technology and methods. We are accomplishing this by funding training, adopting construction standards and codes that result in better performing buildings from both an energy and water use perspective, and providing guidance on streamlining the permitting process for both renewable energy projects and the electric vehicle (EV) charging infrastructure.

On the training front, during 2009 BCD funded courses on green building and how it relates to building codes and regulations, along with a class on solar photovoltaic installation and the building code. These classes focused on both residential and commercial construction and were held in communities around the state. In addition to providing information on new technology and construction practices, the training provided a place where local building officials, inspectors, designers, builders, and developers could come together to learn, ask questions, share experiences, identify code conflicts, and brainstorm possible solutions.

Since Oregon's building code is comprised of 11 different specialty codes that are updated on three-year cycles, training on new code provisions is an ongoing activity. The new energy code for commercial construction is in the final stages of development and will be the subject of one of the code change classes provided by BCD next year. The energy provisions in this code will ensure that newly constructed commercial buildings, such as, office buildings, hospitals, schools, stores, and warehouses use at least 15% less overall electricity and natural gas than if they were built to current code. BCD is committed to expanding its offering of Web based training for building inspectors, contractors, and members of the design community. Many of the green building classes will be available online this fall and in early spring of 2010. Rather than spending valuable time driving in a car to sit in a classroom miles away, local government staff can conveniently access these trainings from their desks.

The new ePermitting basic services is now available. Basic services is a new system that enhances the current electronic permitting services available statewide and will be the foundation for the larger program, ePermitting full services.. Full services will offer contractors a broader range of building department activities online that go beyond simple permitting to include activities such as buying permits that require plan review, tracking the plan review process, and scheduling inspections. Through its online permitting, as well as Web-based training, BCD is supporting sustainability by conserving increasingly limited natural, financial, and human resources. These measures not only help local government burn less fossil fuel, they also serve to stretch tight budgets and use limited staff more wisely.

With the passage of Senate Bill 79 by the 2009 Oregon Legislature, energy efficiency will continue to be a priority for BCD. The bill requires reducing energy use in both new homes and buildings. This has multiple financial and environmental benefits for local governments and citizens including lower utility bills and delaying the need for building new power generation facilities. SB 79 requires energy efficiency increases over current code in commercial structures between 15 and 25 percent and in residential structures between



10 and 15 percent by 2012. The legislation also authorizes the development of a voluntary ‘reach code,’ which will contain optional construction methods and help achieve even higher levels of energy efficiency than required under current statewide code. This ‘reach code’ will ensure that buildings become more energy efficient with each new code cycle.

BCD has also taken the first steps in developing a solar code by forming a committee that began the development process in September. The primary goal for creating a solar code is to provide clarity and promote consistency in the installation and construction standards of photovoltaic (PV) systems statewide. Developing a solar code will also initiate training and provide guidance on this specialized permitting to local building officials and inspectors. When adopted in April 2010, Oregon’s solar code is on track to become the first statewide application of a solar code in the nation. For more information on the progress of the Solar Energy Code Committee go to: <http://www.bcd.oregon.gov/committees/10sec.html>.

When it was recently announced that Oregon will be part of the largest deployment of electric vehicles (EV) and charging station infrastructure in US history, BCD had already developed permit and inspection protocol for EV charging stations. BCD participated in an earlier pilot project with PGE to build some of Oregon’s first EV charging stations. The \$100 million federal grant received by eTec and Nissan, named Oregon as one of five test markets for EV deployment nationwide. Under this grant 1,000 EVs will be sold and another 1,275 charging stations will be installed in the state during 2010. BCD will partner with the International Brotherhood of Electrical Workers (IBEW) to provide training to electricians on the product standards and correct installation of EV charging stations.

For the growing number of cities and counties with concerns over municipal water supply both now and in the future, low flow plumbing fixtures, such as toilets that use as little as 1.6 gallons per flush, are now being required in new construction and remodels. Because toilet flushing accounts for roughly 30% of the approximately 50 gallons a day used by the average person in the United States, BCD approved a statewide alternative method (SAM) to the state plumbing code on water conservation systems in 2008. The SAM allows manufactured, ‘off-the-shelf’ gray water (gray water is waste water from washing machines, showers, bath tubs, and bathroom sinks) systems for flushing toilets to be installed in both residential and commercial structures. Gray water use may soon be expanded for outdoor uses with the passage of House Bill 2080 (2009), which directs the Department of Environmental Quality (DEQ) to develop rules on gray water permitting and reuse. You can find out more about this rulemaking at: <http://www.deq.state.or.us/wq/reuse/graywater.htm>.

Even though local governments in the western part of the state may receive plenty of rainfall, they may still have issues with municipal water supply. Those communities may want to check out the SAM on rainwater harvesting as a way to augment municipal water supplies. Approved by BCD last year, this SAM sets construction standards for rainwater harvesting systems for both potable and non-potable uses in homes and commercial buildings. Consumer guides, called Oregon Smart Guides, are available for both rainwater harvesting and gray water reuse on BCD’s green building services webpage at <http://www.bcd.oregon.gov/programs/green.html>.

These are just some of the efforts BCD is working on to promote green building and help cities and counties around the state become more sustainable. If you have questions, need more info, or want to pass on a great idea contact Gabrielle Schiffer, green building services coordinator, at Gabrielle.M.Schiffer@state.or.us or by calling 503-373-7418.

