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Introducing the green collar corps

By Mark Ching

With job losses rampant and the unemployment rate towering at eight percent, many Americans may be wondering where—and when—new jobs may be coming from. The answer, or at least one of them, may be the “green collar” corps. With \$500 million of the recently signed stimulus package devoted to training for green collar jobs, companies and educational institutions are gearing up to train a new generation of workers in sustainability and energy efficiency.

Virginia Western Community College in Roanoke is already in the process of creating an alternative energy curriculum. According to Leah Coffman, Virginia Western’s administrative officer for workforce development and career placement services, the alternative fuels industry will see significant growth over the next 15 years, spurred on by increasing consumer demand. “One of the things that is driving the curriculum is the stimulus bill,” says Coffman, “but it’s also high energy costs.”

Virginia Western also offers courses in civil engineering, geographical information systems (GIS), environmental technology and water technology—all fields which “influence the development of environmentally friendly systems,” according to Dr. Richard L. Clark, Jr., associate professor of engineering. The community college also partners with Virginia Tech’s Green Engineering program to expose students to the latest in green research and technology.

Annette Osso runs the Virginia Sustainable Building Network, an educational nonprofit group that provides green training. When asked what kinds of jobs might be encouraged by the stimulus package, she singles out construction and farming, two fields most people don’t associate with the emerging green collar workforce. “Jobs related to clean energy involve a lot of construction,” says Osso, pointing to the manpower needed to build wind turbines and the new smart energy grid. As for farmers, the stimulus money includes over a billion dollars for the development of alternative energy sources, including biofuels. Osage Bio Energy, a Virginia-based company founded in 2007, is building its first regional bioprocessing facility in Hopewell. According to Osage’s Website, the Glen Allen company uses regional grain in its processing, and hopes to have the Hopewell plant online in 2010.

In fact, many different professions can “go green” with LEED certification. LEED refers to the Leadership in Energy and Environmental Design Green Building Rating System. Buildings, utilities and construction projects can apply for a LEED rating, and professionals in a variety of fields can test for LEED accreditation. “If you’re an architect or engineer or even a student, you can go out and get LEED certified,” Osso observes, adding that the market for teachers and experts in sustainable practices may also get a shot in the arm from the stimulus bill.

In addition, the Virginia Sustainable Building Network is working to bring training for energy auditors to Virginia. Energy auditors are experts who assess a residence or other building and recommend ways to make it more energy efficient. “It can be anything from recommending a new HVAC system to just telling you to caulk your windows,” says Osso. Audits can cost anywhere from \$300 to \$500—priced for cost-conscious homeowners, but likely worthwhile in long-term

energy savings. Osso hopes the state may offer subsidies in the way Maryland has done. But she realizes the shaky economy makes consumers gun-shy about spending money. “We need state incentives to reduce the cost of audits and home improvements,” she says, “but there needs to be some stimulus on the other side. We need the economy to pick up.”

One unexpected source of energy efficiency could be an emerging field called mechatronics. Mechatronics combines mechanics, electronics and computer technology to develop systems that operate at peak efficiency. Coffman notes that a mechatronic turbine would have computerized logic controls to slow down its rotation during off-peak hours, thus saving electricity. (Probably the best-known example of a mechatronic system is the engine of a hybrid car.) True to its mission to develop marketable skills, Virginia Western Community College is now holding classes in mechatronics and related fields. “We offer classes on building, developing and maintaining mechatronic systems,” says Coffman. “Dual enrollment with high schools is also preparing students to go into these fields because demand is increasing. These are areas of real growth.”

Sustainability is often associated with staying local, and the way the stimulus money will be disbursed remains true to that notion. While some spending details are still up in the air, Osso understands the federal Department of Labor will distribute green jobs training money. “The main avenue will be the workforce development program,” she elaborates. “In our state the community college system is managing that.” At Virginia Western Community College, the local emphasis extends to designing the curriculum. “We ask, ‘are these classes appropriate for what the community needs in this economy?’” explains Coffman. “Our emphasis is on getting hired.”

While environmental and sustainability advocates are excited about the initiatives in the stimulus package, they are also cautious. Spending on green jobs training is not expected to be immediate, according to Osso: “A lot of the money would be going to ‘shovel ready’ projects, but that might not include training.” But the irony that the economic downturn may encourage growth in a field derided as being “expensive” is not lost on its proponents. Laura Wasko, owner of Retellus, a consulting firm that advises companies and contractors on sustainability and green practices, is especially excited about the \$17 billion designated for rail development. “From a jobs standpoint, that means construction, drivers and maintenance,” Wasko observes. Osso also notes another compelling aspect of most green-collar jobs, like energy auditors and wastewater managers: “These jobs can’t be sent overseas.”

Excitement aside, when the first dollar appears in Virginia is anybody’s guess. Osso’s organization is just ramping up in anticipation of the increased funding: “Were just starting to talk about it here in the state.”

(Mark Ching is a Roanoke-based freelance writer.)