

Green Jobs and Workforce Development in the High Country

David Waechter

CCC&TI Institute for Sustainable Technology

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Objectives

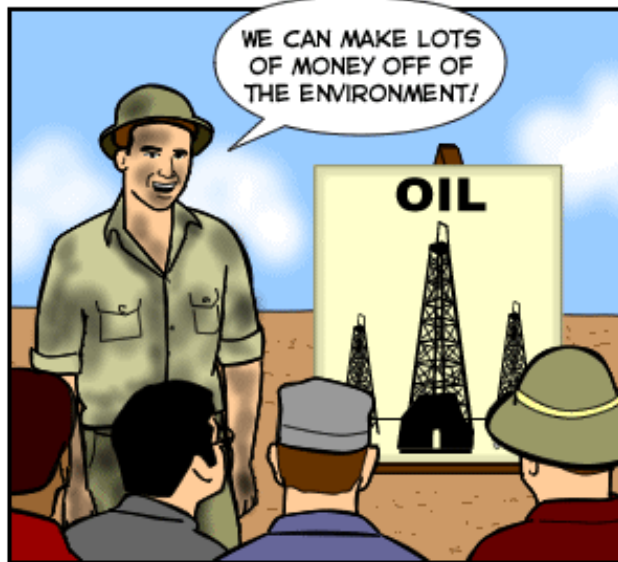
- Define sustainable
- Learn about “Green-collar Jobs”
- Identify how CCC&TI is responding to the growing demand for sustainable technologies
- Consider ways to strengthen our alliances to foster a “Green Economy” in the our region



18th century



19th century



20th century

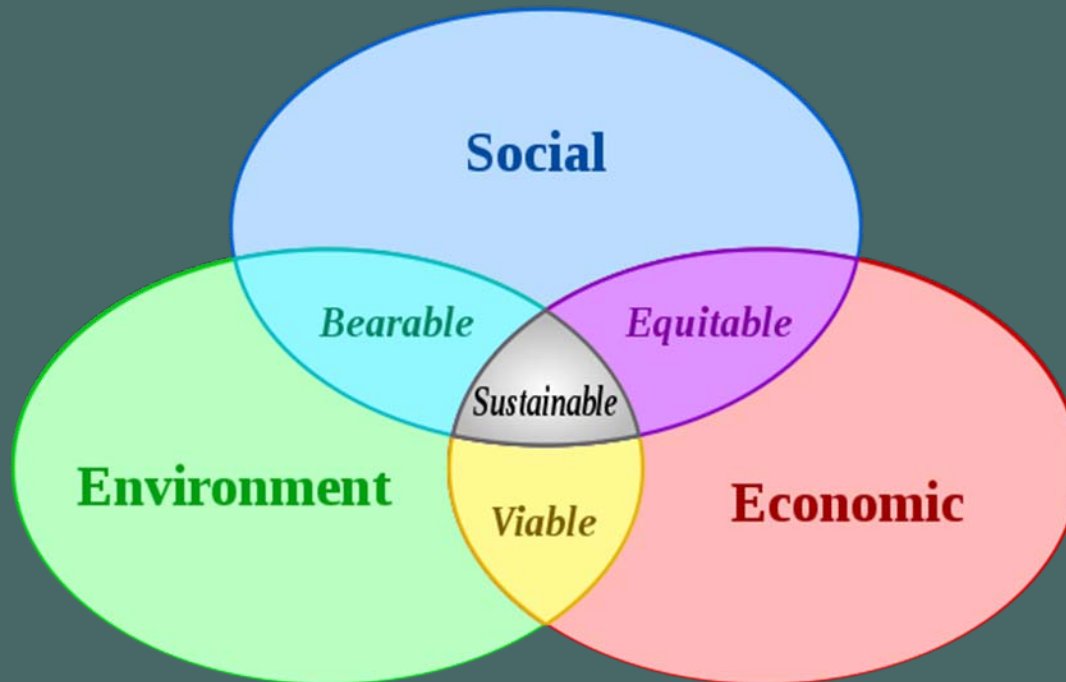


21st century

Sustainability

In 1989, the World Commission on Environment and Development (Brundtland Commission) articulated what has become the most widely accepted definition of sustainability:

“To meet the needs of the present without compromising the ability of future generations to meet their own needs.



Sustainable Business

Economically
profitable

- The real green...



Environmentally-conscious

- Safe, healthy, minimizes waste, energy conservative

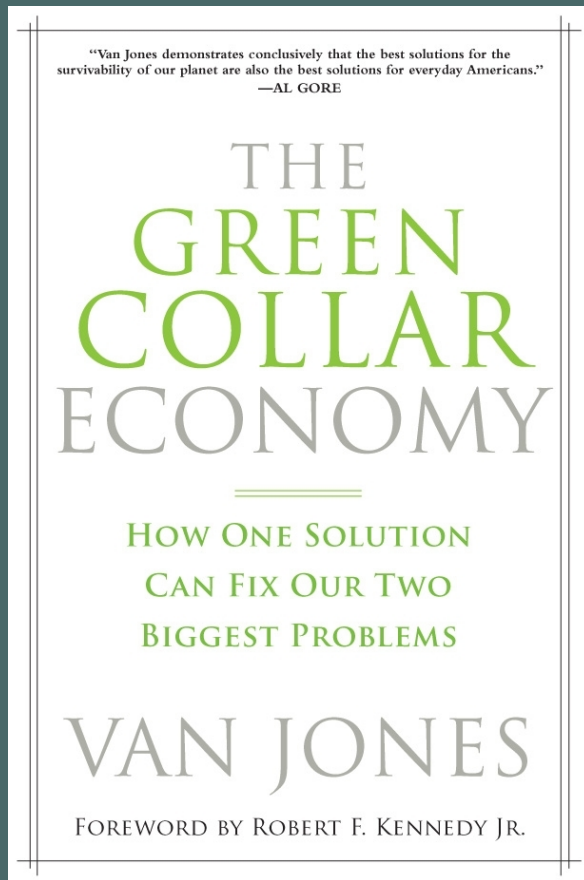


Socially progressive

- Innovative, family-friendly, diverse, living wage, fair labor



Green Collar Jobs Rebuild a Strong Middle Class



- Green-collar jobs are good jobs.
- Like blue-collar jobs, green-collar jobs pay family wages and provide opportunities for advancement along a career track of increasing skills and wages.
- A job that does something for the planet, and little to nothing for the people or the economy, is not a green-collar job.

Green-Collar Jobs Provide Pathways Out of Poverty

- Most green-collar jobs are middle-skill jobs requiring more education than high school, but less than a four-year degree
- Well within reach for lower-skilled and low-income workers as long as they have access to effective training programs and appropriate supports.
- Green-collar job strategies should provide opportunities for low-income people to take the first step on a pathway to economic self-sufficiency.

Green-Collar Jobs Tend To Be Local Jobs

- Much of the work we have to do to green our economy involves transforming the places that we live and work and the way we get around.
- These jobs are difficult or impossible to offshore.
- One of the major sources of manufacturing jobs -- a sector that has been extensively off-shored -- are components parts for wind towers and turbines. Because of their size and related high transportation costs, they are most cost-effectively produced as near as possible to wind-farm sites.
- Cities and communities should begin thinking now about ways their green strategies can also create local jobs.

A Green-Collar Job Strengthens Urban and Rural Communities

- Urban and rural America have both been negatively impacted over the past decades by a failure to invest in their growth
- Green-collar jobs provide an opportunity to reclaim these areas for the benefit of local residents



Green Jobs are Good for the Earth

- The "green" in green-collar is about preserving and enhancing environmental quality.
- Green-collar jobs are in the growing industries that are helping us kick the oil habit, curb greenhouse-gas emissions, eliminate toxins, and protect natural systems.
- Green Jobs are intent on improving lifestyles to become more sustainable overall.

Green-Collar Jobs Require Some New Skills (and new thinking about old skills)

- The green economy demands workers with new skill sets.
- Some green collar jobs are brand new.
- Even more are existing jobs that are being transformed as industries transition to a clean energy economy: computer control operators who can cut steel for wind towers as well as for submarines; or mechanics who can fix an electric engine as well as an internal combustion engine.

Green Jobs or Green Skills

1. Bicycle repair and bike delivery services
2. Car and truck mechanic jobs, production jobs, and gas-station jobs related to bio-diesel, vegetable oil and other alternative fuels
3. Food production using organic and/or sustainably grown agricultural products
4. Green building, construction, heavy equipment operators, blasting, drilling
5. Waste Management and composting on a large scale
6. Deconstruction, hauling and reuse of construction and demolition materials and debris
7. Hazardous materials clean up, testing, remediation
8. Plumbing for hydronics, boilers, solar thermal
9. Manufacturing jobs related to large scale production of a wide range of technologies (i.e. solar panels, bike cargo systems, green waste bins, etc.)
10. Materials reuse/producing products made from recycled, non-toxic materials
11. Non-toxic household cleaning in residential and commercial buildings
12. Parks and open space maintenance and expansion
13. Printing with non-toxic inks and dyes and recycled papers
14. Public transit jobs
15. Recycling
16. Renewable energy installation and maintenance
17. Arborist, landscape design, horticulturalist
18. Peri-urban and urban agriculture
19. Whole home performance testing (i.e: HVAC, attic insulation, weatherization, etc.)
20. Retrofit for residential and/or commercial buildings

Local Green Business Examples

- SunQest
- BRESCO
- GDS
- WNCGBC
- Carolina Foam Solutions
- Building Performance Engineers
- S&W Associates
- Chemical Coatings
- Southern Energy
- BREMCO
- Duke Energy
- Soil and Water Conservation
- Blackburn Landfill site/EcoComplex

CCC&TI Programs with Green Elements

Certifications

- Building Performance Institute
 - HVAC
 - Envelope Specialist
 - Retrofit
- NABCEP Certification
 - PV Installer
 - Solar Thermal
 - Wind
- HERS Certification Prep

Courses

- Green Business 101
- Sustainable Development
- Renewable Energy Overview
- Green Sculpture
- Small Business Seminars
- Advanced HVAC
- Lineman Training Program

Homebuilder Pathway

- Regular Carpentry Program of Study or 5 years licensed experience
- Sustainable Development
- Introduction to Sustainable Design
- Emerging Trends in High Performance Building
- Renewable Energy Overview
- Water Management and Green Landscape Design
- Contractor's License Prep
- Certification Choice
 - HERS
 - Building Performance Institute

HVAC Pathway

- HVAC Program of Study or 5 years licensed experience
- Sustainable Development
- Advanced HVAC
- Renewable Energy Overview
- Emerging Trends in High Performance Building
- Certification Choice
 - HERS
 - NABCEP
 - Comfort Institute
 - Building Performance Institute

Electrical Pathway

- Electrical Program of Study
- Sustainable Development
- Fundamentals in Photovoltaic Technology
- Renewable Energy Overview
- Emerging Trends in High Performance Building
- NABCEP - PV Installer and/or Wind

Plumbing Pathway

- Plumbing Program of Study
- Sustainable Development
- Fundamentals in Solar Thermal Technology
- Renewable Energy Overview
- Emerging Trends in High Performance Building
- NABCEP – Solar Thermal Installer

NC Workforce Development Boards

The system prepares North Carolinians facing economic disadvantage, job loss, and other serious barriers to employment

- Increased employment
- Higher earnings
- Strong educational and occupational skills
- More competitive businesses



To do list:

1. Identify the specific skills the green economy demands in our area.
2. Invest our time in *creating* new training programs and *retooling* existing training programs for these skills.
3. Market these programs collectively: agencies, businesses, educators, and anyone who will listen or look.

Conclusion

- Green Jobs require sustainable businesses
- Businesses must operate in sync with the environment, economy and society to be sustainable long term
- Policy action now foretells an enormous spike in sustainable development for the U.S.
- CCC&TI is providing courses today to train tomorrows “Green-collar workers”
- The speed of the market demands we stay connected through relationships