

# 2010 Lehigh Valley Green Building Expo



Saturday, March 20  
9:00am – 8:00pm

Sunday, March 21  
10:00am – 5:00pm

Northampton Community College  
Main Campus - Gymnasium  
Admission \$5

[www.lvgreenbuilders.org/expo](http://www.lvgreenbuilders.org/expo)

## Description of Talks, Workshops, Demonstrations & Kids Expo

### Solar Track

Room 146

#### **Solar Electric: Is it Right for You?**

**SAT 10:00 AM & SUN 11:00 AM (Room 146)**

Vera Cole, Mid-Atlantic Renewable Energy Association (MAREA) and author of *Pennsylvania Homeowner's Guide to Solar Electricity*

So you want to put some solar panels on your roof or in your yard? This introductory presentation by Vera Cole helps you determine if solar electric may be right for you. Learn how solar electric works and general site requirements, plus how to estimate electricity production, initial costs and lifetime savings (for your pocketbook and the environment).

#### **Solar Electric Siting—Location, Location, Location**

**SAT 11:00 AM (Room 146)**

Bill Hennessy and Vera Cole, Mid-Atlantic Renewable Energy Association (MAREA)

Will solar electric work on my property? Understand how orientation, tilt and shading affect solar electric performance and how to estimate their effects on your project. Different mounting options will be presented along with other general layout considerations (inverter location, line losses/wire sizing, trenching).

#### **Solar PV Installation for the Professional and Knowledgeable DIY**

**SAT 1:00 PM – 3:00 PM (Room 146)**

Jack Schreiber, Assist. Dir., Technical Programs, Northampton Community College

This seminar is designed for the professional & knowledgeable do it yourselfer who has a basic understanding of photovoltaic operation and wants to learn more about electrical codes, regulations & safety practices applicable to the installation of residential PV systems.

#### **Solar Hot Water for your Home**

**SAT 3:00 PM (Room 146)**

Robert Elwell, Principal, Hickory Ridge

Learn about using the sun to provide free year round hot water. Types of systems suitable for our region, installation examples and tips for selecting a contractor will all be discussed in this session on domestic hot water generation.

#### **Solar Hot Water for Heating your Pool and Spa**

**SAT 4:00 PM (Room 146)**

Robert Elwell, Principal with Hickory Ridge

Learn about how to extend your swimming season and reduce your operating costs for your pool or Spa. Pool heating is a very economical alternative to propane heaters in our region. This session will provide you with the basics for shopping for a system.

#### **Solar Electric: Answering Your Many Questions**

**SAT 5:00 PM & SUN 3:00 PM (Room 146)**

Charlie Reichner, Heat Shed

Charlie has been installing solar panels since the 1970s and he has developed a wealth of knowledge to help both the novice and the seasoned professional. Charlie will respond to your many questions about Solar Photovoltaic (PV) and related technologies.

#### **Solar Electric Incentives and Financial Considerations**

**SUN 1:00 PM (Room 146)**

Vera Cole, Mid-Atlantic Renewable Energy Association (MAREA) and author of *Pennsylvania Homeowner's Guide to Solar Electricity*

Thinking seriously about solar power? There are multiple programs for financial assistance; some are close to running out; some are tax credits and some pay as you generate electricity. One incentive, the S-REC, can be significant, but the ability to benefit is dependent on a number of factors. Learn about these factors and get the straight scoop on solar power incentives.

#### **Alternative Energy Sources for Radiant Floor Heating**

**SUN 2:00 PM (Room 146)**

Robert Elwell and Craig Edwards, Hickory Ridge Radiant

Learn why alternative heating sources like geothermal heat pumps and solar hot water collectors are such a good match for radiant floor heating. Includes a basic overview of the principles of radiant heating, design examples and actual installations here in the valley.

### Renewables & Energy Efficiency

Room 169

#### **Catching the Wind – Wind Power Basics**

**SAT 10:00 AM (Room 169)**

Philip Jones, EMS Environmental, MAREA and Lehigh Valley Green Builders

Lots of people would love to have a wind turbine in their backyard. Does wind power make sense for your yard or community? Learn about what makes a good wind turbine site and what factors you should consider to catch the wind.

**Geothermal: What is it?**

**SAT 11:00 AM (Room 169)**

Alex Bodian, Principal, TeraTherm Geothermal, IGSHP Accredited Designer & Installer

It's been around since the 1940's. Parkland School District is installing a big one right now. Farmers love it. And homeowners are installing it like never before! So, what is Geothermal? Alex presents an introduction to Geothermal - description, residential design, how it stacks up to other heating & cooling systems and energy saving benefits of the ground source heat pump, aka geothermal.

**The Straight Scoop on Heating Ventilation and Air Conditioning**

**SAT 1:00 PM (Room 169)**

Daniel Philipps, Manager HVAC/R Education at Northampton Community College

Thinking about upgrading your heating or air conditioning system? Having difficulty sorting out the new systems versus what you currently have? Dan helps you sort out the different heating & cooling systems, how they work & whether they can work in your home.

**Residential Renewable and Energy Efficiency Incentives**

**SAT 2:00 PM (Room 169)**

Panel Presentation

There are Pennsylvania, Federal and utility incentives to invest in renewable technologies and energy efficiency. Learn about what incentives are available and what you need to do to qualify for the purchase rebates, energy production credits and tax credits.

**Energy, Building Science and the Magic of Infrared**

**SAT 3:00 PM (Room 169)**

Brad K, Kembek LLC

Come join Brad to see the WOW Factor of Infrared! His presentation will show the many uses of infrared and how they can benefit your home or business. Kembek, LLC specializes in providing Professional Thermal Imaging Services & Home Performance Energy Audits.

**Residential Energy Improvements**

**SAT 4:00 PM (Room 169)**

Bruce Wilson, LEED AP, co-owner Bruce Wilson Contracting, Co-founder of Lehigh Valley Green Builders

Bruce explains how to approach improving your house's energy performance using an energy audit to define where your energy is going. With that understanding, your building type & aesthetic considerations, Bruce explains how to make improvements, including sorting thru green washing & sales agendas to come to a decision on how to improve your house's energy performance.

**Installing Geothermal**

**SUN 11:00 AM (Room 169)**

Craig Edwards, Hickory Ridge Solar

Considering the installation of a geothermal heat pump in your home? Learn about the basic performance rating system, how to evaluate different types of GSHP proposals, and key questions to ask your contractor.

**Economics of a Successful Geothermal System**

**SUN 1:00 PM (Room 169)**

Alex Bodian, Principal, TeraTherm Geothermal, IGSHP Accredited Designer & Installer

You're thinking about how this neat thing called Geothermal could work in your home. It can save at least 50% over other heating and cooling systems. But you've heard it might be expensive. So, is Geothermal affordable and does it make sense for you? Well, Geothermal is affordable and does pay for itself. And, more than likely, it's a sensible choice for your home. Alex shows how the numbers really work with a Ground Source Geothermal System.

**How to Use Less Energy for Heating, Cooling and Hot Water and Live to Tell Others**

**SUN 2:00 PM (Room 169)**

Ed Lehr, President, Jack Lehr Heating, Cooling & Electric

Heating, cooling & hot water consume 2/3 of the energy used in a home and 1/2 the energy in a commercial building. Ed offers options to reduce energy use thru maintenance, modification & system replacement with tips to help evaluate the best options for your residence/small business. Health & comfort also result from energy improvements. Let's be sure we don't harm our family or co-workers.

**Energy in My Backyard, Tapping Local Resources for our Energy Needs**

**SUN 3:00 PM (Room 169)**

Philip Jones, Alliance for Sustainable Communities – Lehigh Valley

There are power sources all around us, we just have to recognize the opportunities and consider where our energy comes from. Learn about energy sources in our own community and consider the opportunities.

**Professional Track**

**Room 162**

**Sponsored by Northampton Community College's Center for Business & Industry**

**How Green is the Lehigh Valley?**

**SAT 10:00 AM (Room 162)**

Christine Ussler and Lucienne Di Biase Dooley, Artefact Inc.

You may have walked by one or even been in one. There are many green buildings in the Lehigh Valley. Discover some of them, what makes them green and some of their features, which might inspire us all to live and work in green buildings.

**Introduction to Green Building for the Building Professional**

**SAT 11:00 AM (Room 162)**

Bruce Wilson, LEED AP, co-owner Bruce Wilson Contracting, Co-founder of Lehigh Valley Green Builders

Bruce will speak about the many benefits of green building, including lower operating costs, improved resale value and improved health benefits. Bruce will explain how integrated design can help green buildings achieve higher performance with little or no increase in cost.

**Stormwater Infiltration and Rain water Re-Use in New Developments**

**SAT 1:00 PM (Room 162)**

Jake Arner, Owner, Arner Development & Construction Services, LLC

Jake will share his design for responsible stormwater management using the latest methodology for stormwater infiltration and rain water re-use in a community he is developing in Carbon County.

**Lime Mortar in Restoration Work**

**SAT 2:00 PM (Room 162)**

Rob Wozniak, Preservation Works, Ltd.

Historic restoration & preservation is being recognized for what it has always been, an important contributor to a greener planet. Learn about lime in historic restoration: what it is, where it was used, why it should be used now and how it is in keeping with green building.

**Design & Construction of Permeable Interlocking Concrete Pavements**

**SAT 3:00 PM (Room 162)**

Daniel G. Moreland, Belgard Architectural Representative

Stormwater regulations and increased environmental awareness are forcing customers to make tougher pavement selection decisions. Manufactured locally in Easton, PA, water cleaning Permeable Interlocking Concrete Pavement (PICP) systems allow customers to add pavement without sacrificing precious pervious cover. This course qualifies for AIA, CES, ASLA and HSW credits.

**Wood You Like to Know**

**SAT 4:00 PM (Room 162)**

T.C. Feick, LEED-AP, NAHB CGP, Sustainable Building Coordinator, Shelly Enterprises

Selection of materials for a green project can be a daunting task, and choosing wood products with sustainability in mind is no exception. Find out why this is important; what attributes to look for (or avoid!), certification systems for sustainably harvested wood, and sourcing options for environmentally friendly wood products.

**Energy Efficiency in Businesses**

**SAT 5:00 PM (Room 162)**

Philip Jones, EMS Environmental, Inc.

Recently small businesses have been hit by a significant increase in electricity rates on top of other increasing energy costs. Phil offers a methodology and examples of ways to mitigate these cost increases with energy savings that help the business overall.

**Getting Out of the Membrane Roof Rut – Integrated Design in Commercial Roofing**

**SUN 11:00 AM (Room 162)**

Ken Ashcom, Acoustical Spray Insulators and Kurt Behner, Lapolla Industries

The majority of commercial roofing in the Lehigh Valley consists of single-ply membrane roofing. Other options are more sustainable and provide better energy efficiency, such as Recovery Coating Systems & Spray Foam Roofing Systems.

**Lead – Understanding How to Safely Work on Older Buildings**

**SUN 1:00 PM (Room 162)**

Jim Quigley, MS, BBEC, Principal, Healthy Spaces

Jim teaches many aspects of healthy buildings, is certified as a Lead Worker in PA and approved by the EPA as an instructor for the Renovation, Repair & Painting rule for lead containment. Jim provides vital information to safely working with lead in older buildings.

**Radon remediation as it concerns indoor air quality**

**SUN 2:00 PM (Room 162)**

Bill Brodhead, President, WPB Enterprises, Inc.

Bill Brodhead has been pioneer and innovator in radon remediation since 1986. He has done extensive research and worked with both the PA and NJ Departments of Environmental Protection. Bill will explain what radon pollution is, how it works and how to mitigate it.

**Insulated Concrete Forms**

**SUN 3:00 PM (Room 162)**

Jim Lemon, Thermal-Crete, Inc.

Vertical insulated concrete forms are used as the exterior walls of residential and commercial buildings. The forms provide an energy efficient envelope for above & below grade walls, resulting in significant energy savings. Jim explains how to design and build with insulated concrete forms.

**Green Building**

**Room 168**

**Introduction to Residential Green Building**

**SAT 10:00 AM (Room 168)**

Bruce Wilson, LEED AP, co-owner Bruce Wilson Contracting, Co-founder of Lehigh Valley Green Builders

Bruce provides an overview of what goes into building a Green House. How good an investment is Building a Green House? An overview of passive solar design, super insulation, green finishes, sustainable materials, renewable energy, energy efficient lighting and appliances, daylighting including a look at financing the added costs and analyzing the benefits.

**Energy Efficiency & Going Green with Existing Homes**

**SAT 11:00 AM (Room 168)**

Brian M. Baker, LEED AP | CGP Owner | V.P. of Marketing & Design *Renu Building & Energy Solutions & studio26 homes*

With the recent economic downturn in the housing market, elevated energy prices, increased financial incentives, and a more eco-conscious consumer base, more homeowners than ever are seeking greener, more energy-efficient alternatives to buying or building a new home. While often a little more challenging than new construction, remodeling your kitchen or basement with an environmental sensitivity or renovating your existing home with energy-efficient improvements can not only be done effectively, but can also be beautifully crafted as well. Some of the topics covered include energy audits, energy-efficient solutions, and green remodeling.

**LEDs, A Clear Future for Lighting**

**SAT 1:00 PM (Room 168)**

Kevin Baker, CEO, Sitka Enterprises

LEDs are already in your future. Learn about LED lighting and how it can fit the lighting needs for your business and residence. Learn how to consider the benefits, economics and aesthetics of LED lighting versus some other available choices.

**Your New Green Home**

**SAT 2:00 PM (Room 168)**

Lorna Midgelow, Midgelow Green Business Consulting

So you want a green home? It may take more effort to get what you want. Learn from a seasoned green veteran who just built her own green home how to plan and manage so that you get the green home of your dreams.

**Designing a Passive Solar House**

**SAT 3:00 PM (Room 168)**

Roy H. Taylor, Architect, LEED AP and principal, RT3 Architects

Roy explains the important role of passive solar design for efficient heating, cooling and comfort. Roy explains concepts such as thermal mass in home design to regulate temperatures day & night and across seasons. Solar energy is not only absorbed by solar panels, but also by the building, making it a source of heat that can help if properly considered or hurt if not properly considered. Integration of the multiple aspects of passive solar design are required to receive the benefits. The choice of materials, placement and how they are integrated with the rest of the design determine their effectiveness towards the desired result.

**Building Naturally**

**SUN 11:00 AM (Room 168)**

Sigi Koko, Principal, Down to Earth Design

Sigi shares her vision of building design with green-colored glasses, how to create resource efficient, energy conserving, beautiful structures using strawbale and other natural building techniques. Her talk includes simple & inexpensive solutions to gain multiple benefits to health, ecological impact, quality of life, & resource use (including water & energy). She covers five categories to consider in designing/creating a well-rounded “green” building: site development, water conservation, energy efficiency and health and well-being.

**Garden Roofs – new technologies and considerations**

**SUN 1:00 PM (Room 168)**

Kevin J Gough V.P., Alan Kunsman Roofing and Siding Inc.

Kevin explains the positive benefits of the green/garden roof, the old and new technologies of roof garden systems, as well as the basic roof specifications and considerations a homeowner / building owner should request and investigate prior to installing a garden roof.

**Green Home Certification Options**

**SUN 2:00 PM (Room 168)**

Panel presentation

With the growing demand for more energy efficient, healthy and environmentally-friendly alternatives to conventionally built houses, homeowners are beginning to recognize the many benefits third-party certified, green home design/construction offers their families. The panel will help introduce and compare multiple several national green certification programs, such as NAHB National Green Building Program, LEED, ENERGY STAR and WaterSense.

**Building Biology: Principles on Healthier Approaches to Building**

**SUN 3:00 PM (Room 168)**

Jim Quigley, MS, BBEC, Principal Healthy Spaces

Bau-Biologie®, or Building Biology, is the holistic study of the interactions among our built environment, human health and ecology. The principles of Bau-Biologie are based on the premise that what is healthy for the occupants is also good for the environment. These principles that emerged in Germany due to problems with post-war housing construction are relevant today. Jim addresses key principles of Building Biology, planning for Indoor Air Quality (IAQ), and the hierarchy of resolving IAQ problems. This session is appropriate for builders, designers, contractors, and homeowners.

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| <b>Green Living</b> | <b>Sponsored by OurHouse</b> | <b>Room 161</b> |
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**Creating Backyard Wildlife Habitats**

**SAT 10:00 AM (Room 161)**

Lois Prytherch, Penn State Lehigh/Northampton Master Gardener

Focus on developing your outdoor space to be an oasis for birds, butterflies, wildlife and, of course, humans. The presentation introduces the National Wildlife Federation’s Backyard Habitat program.

**Plan Before Growing Vegetables**

**SAT 11:00 AM (Room 161)**

Pat Corey, Penn State Lehigh/Northampton Master Gardener

Learn the critical steps to garden success, including choosing garden location, what’s in your soil & why it leads to your success; seeds vs. transplants; starting seeds indoors; garden structures; companion plantings & container gardening; a peek at beneficial insects.

**Fueling Pennsylvania - Current & Future Trends and their Effects on Climate Change**

**SAT 1:00 PM (Room 161)**

Joy Tetlak-Adelstein, Citizens for Pennsylvania’s Future (PennFuture)

Joy’s presentation will include current energy, the breakdown of fuel use in PA, future clean energy and House Bill 80, other current and future energy trends and the Marcellus shale situation.

**Rain Gardens**

**SAT 2:00 PM (Room 161)**

Sue Drabic, Penn State Lehigh/Northampton Master Gardener

Rain gardens are beautiful, useful gardens that slow the movement of stormwater while conserving water in your landscape. Learn how to site and plant a rain garden on your property using hardy native plants.

**Garden Jeopardy!**

**SAT 3:00 PM (Room 161)**

Sue Drabic, Penn State Lehigh/Northampton Master Gardener

Using the game show format, the audience will be divided into two teams to compete and learn basic gardening concepts like planting, pruning, and pest care through questions and answers.

**Ace Your Space!**

**SAT 4:00 PM (Room 161)**

Colleen Warmingham, Space Inventors Professional Organizers

Bring peace to your space. If clutter stands between you and your goals, get organized! Learn how efficient organizing solutions will streamline your home or office, save time and money, and lower your stress. Learn how to make peace with your paper, tame your technology, go green, harmonize your home and boost your business.

**Practical Composting**

**SUN 11:00 AM (Room 161)**

John Drabic, Penn State Lehigh/Northampton Master Gardner

Turn garden and kitchen waste into black gold. Save landfill space by learning to recycle grass, branches, leaves and more.

**Using Native Plants in Your Landscaping**

**SUN 1:00 PM (Room 161)**

Sue Tantsits, Horticulturist, Edge of the Woods Native Plant Nursery in Orefield, PA,

Sue will discuss the use of native plants in developing more sustainable landscaping. Native plants are adapted to local conditions and provide food and habitat for native songbirds, butterflies, insects and wildlife. Native plants help promote an overall healthier ecology that requires less effort to maintain and look beautiful! She will explain what makes a plant native, why native plants are important, and highlight specific plants that homeowners can use in their landscapes.

**Building Sustainability into Your Community**

**SUN 2:00 PM (Room 161)**

Roy H. Taylor, Architect, LEED AP and principal, RT3 Architects

Roy explores the role of community in meeting goals for sustainability. Roy will be looking at how communities can plan for a sustainable future by working together to answer the questions: How do we significantly increase local resilience (to mitigate the effects of Peak Oil) and drastically reduce carbon emissions (to mitigate the effects of Climate Change)?" He will address these questions by looking at all the key areas of life; food, energy, transport, health, heart & soul, economics & livelihoods, etc.

**Green Spaces for Better Places**

**SUN 3:00 PM (Room 161)**

Scott Rothenberger, Principal, Scott Rothenberger Places

As we all move towards a more responsible lifestyle and hopefully gain further respect for our environment, we need to turn our attention to the green spaces that surround our homes. Through a colorful power point presentation Scott Rothenberger of Scott Rothenberger's PLACE will enlighten us to landscape concepts that enhance our lives and improve our relationship with our world.

**Kids Expo**

**Various Locations**

**Recycling - Let's Make Paper  
Grade 4 and up**

**SAT 10:00 AM & SAT 1:00 PM (Penn Hall, Room 129)**

Barbara Canfield, Assistant Dean, Business and Technology, Northampton Community College

An interactive workshop teaching students to make paper. Participants will learn how to turn paper scraps or junk mail into paper you can use. Make your own paper and help the environment too!

**Butterfly Gardening and Butterfly Craft  
Grades 1-5**

**SAT 10:00 AM (WDIY Zone – Kid's Activity Area/Stage)**

Penn State Lehigh/Northampton Master Gardeners

Learn all about gardening to attract butterflies into your own backyard and then make a caterpillar craft.

**Worm Bin Composting**

**SAT 11:00 AM (Rm 129)**

**All Ages (Children <7yrs must be accompanied by adult)**

Jason Slipp, Lehigh University Environmental Advisory Group

Participants will learn the essentials of successful composting and make their own worm bin using simple household items. The bins can be used to compost food waste and make high-quality mulch for gardens or potted plants. Open to adults, families and teens.

**Cost: \$5 (while supplies last) – Sign-up at the Front Desk**

**Seed Starting from A to Z  
Grades 1 and up**

**SAT 11:00 AM (WDIY Zone – Kid's Activity Area)**

Rodale Institute Staff

Join the expert gardeners at Rodale Institute to learn all you need to know about starting plants from seed. Come prepared for a fun activity, get your hands in the soil & take home a seeded container with instructions on how to care for your plant. (while supplies last)

**It Isn't Easy Being Green: Saving the Planet in Song and Dance  
All Ages**

**SAT 12:00 NOON, 3:00 PM & SUN 12:00 NOON, 2:00 PM  
WDIY Zone – Kid's Activity Area)**

NCC Theatre and Dance students guided by Jaye Beetem and Tabatha Robinson-Scott

A collection of entertainment geared to promote conservation awareness including songs, a reading performance of The Lorax by Dr. Seuss, and a new modern dance presentation entitled "Off the Press".

**Make Your Own Rain Gauge  
Grade K +**

**SAT 1:00 PM – 4:00 PM & SUN 1:00 PM – 4:00 PM  
(WDIY Zone – Kid's Activity Area)**

Home Depot Staff

Make a rain gauge to use in your garden to measure the amount of rain that falls! **Cost: Free – while supplies last.**

**Measuring YOUR Ecological Footprint**

**SAT 4:00 PM & SUN 11:00 AM (Room 165)**

**Grade 3 +**

Gail Mrowinski, Associate Dean, Community Education, Northampton Community College

An interactive workshop for children to learn about their ecological footprint, how to measure it, and actions they can take to reduce it. Participants will explore various websites & play games that help them learn about the environment, while having fun at the same time.

**ON GOING KIDS**

**Creative Art Activities**

**SAT 10:00 AM – 5:00 PM & SUN 11:00 AM – 4:00 PM**

**Age 3 +**

**(WDIY Zone – Kid’s Activity Area)**

Horizons for Youth, Future Teachers Club and the Art Club, Northampton Community College

Using recycled products make a bottle bug, egg carton cut-ups, a colorful butterfly or paper bead bracelets. Color your imagination wild with “EnviroScapes” and “EcoLights”.

**Workshops & Demonstrations      Sponsored by WDIY 88.1 Radio      Various Locations**

**How to Weatherize Your Home**

**SAT 10:00 AM, 2:00 PM & SUN 11:00 AM (WDIY Zone – Workshop/Demo Area)**

ASI & Saving Green Energy Audits

Learn how to caulk and weather-strip windows and doors to save energy and improve comfort through a guided demonstration. Also, weather-permitting watch how the professionals air seal your home using foam insulation.

**Container Gardening**

**SAT 10:00 AM (WDIY Zone – Kid’s Activity Area)**

Rodale Institute Staff

What can be more satisfying than harvesting fresh herbs, vegetables or flowers right from your patio or even your windowsill? Containers are the answer when we don’t have the space or the time to plant a backyard garden. In this workshop, Rodale Institute experts will guide you through plant selection, choosing a container, soil mixes, fertilizing and watering, and how to keep your container garden looking good all season long.

**Make Your Own Rain Barrel**

**SAT 11:00 AM, 1:00 PM & 2:00 PM (WDIY Zone)**

Saucon Creek Watershed Association

Construct your own rain barrel out of provided materials - install it in your downspout and capture rainwater to irrigate your garden beds.

**Cost: \$35 - while supplies last (Register at Front Desk)**

**Strawbale Wall Construction**

**SUN 1:00 PM – 4:00 PM (WDIY Zone)**

Sigi Koko, Down to Earth Designs

Watch a strawbale wall being constructed and then plastered with natural clay materials.

**ON GOING DEMONSTRATIONS**

**“Green Your Cleanup”**

**SAT 10:00 AM – 5:00 PM & SUN 11:00 AM – 4:00 PM (WDIY Zone – Workshop/Demo Area)**

Environmental Issues Committee, Northampton Community College

Make and take your own “All Surface Spray” from safe, non-toxic household chemicals.

**Cost: \$1 donation is requested to defray the cost of the bottle (while supplies last)**

**Solar Hot Water and Photo Voltaic Demonstration Trailer**

**SAT 9:00 AM – 8:00 PM & SUN 10:00 AM – 5:00 PM**

Long's Construction

**(Parking Lot/Gym Entrance)**

Watch the meter spin and the water temperature rise on this demonstration of harnessing the sun’s power.

**Geothermal Demonstration**

**SAT 9:00 AM – 8:00 PM & SUN 10:00 AM – 5:00 PM (WDIY Zone – Workshop/Demo Area)**

Northampton Community College

Explore the principles of geothermal heating and cooling with this practical demonstration.

**Weatherize Your Home Display**

**SAT 9:00 AM – 8:00 PM & SUN 10:00 AM – 5:00 PM (WDIY Zone – Workshop/Demo Area)**

ASI & Saving Green Energy Audits

Check out the display showing caulked and weather-stripped windows and doors to save you energy and improve your home’s comfort.