



Connecticut Homes Let the Sun Shine In

Meet the Mortons. They're an average family living in eastern Connecticut. They've got kids, a dog, cars, and a typical house with all the familiar appliances and electronics. They also have high monthly electricity bills, but not for long. They're installing a solar photovoltaic (PV) system on their roof and will be using the sun's energy to power their household.



Martha Morton eagerly explained, "We've been thinking of going solar for several years, but cost has always been an issue even with rebates and grants. We didn't want to add a second mortgage to afford a PV system. Then we found out about the CT Solar Lease program, and that gave us an affordable way to go solar. There is no down payment and we've locked in the cost of our monthly electric bill."

The Mortons are among a growing number of Connecticut families who are switching to solar. Since 2004, more than 1,000 solar PV systems have been installed at homes across Connecticut. The out-of-pocket

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Using solar energy for your home is now easier and more affordable thanks to two programs available from the Connecticut Clean Energy Fund.

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Let the Sun Shine In

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cost for solar energy — on average between \$35,000 and \$50,000 — puts it out of reach for most Connecticut residents. However, the innovative CT Solar Lease Program and funding from the CT Clean Energy Fund's **Small Solar PV Rebate Program (SSRP)** are making it possible for homeowners to offset the cost of putting in solar panels to generate electricity. New funding was recently made available thanks to \$1.5 million from federal stimulus funds and an additional \$1.6 million from Connecticut electric rate payers.



The Mortons check the output of their PV system.

For homeowners who buy a system, the solar rebate program can provide as much as \$15,000 per home PV installation, plus there is a federal tax credit available of 30 percent of the cost. While the initial costs are high, after installation monthly charges for electricity can be next to nothing. Buying a PV system is like paying years of electricity bills up front. In fact, on many days there is more than enough electricity generated to power a home so there is the added benefit of selling excess power to the utility company. The power that's not used by the homeowner flows back into the grid, runs the meter backwards (called net excess generation, or NEG) and is credited to their utility bill at the retail rate.

For homeowners who do not purchase a PV system, the **CT Solar Lease Program** requires no down payment and the monthly cost is fixed, less than \$120 per month for a typical 5 kW system. The lease runs for 15 years at which time you have the option to purchase the system or extend the lease for an additional 5 years at a reduced cost. This program allows moderate and lower income homeowners who are customers of CL&P and UI to add solar energy without the upfront costs of ownership.

Have the Mortons got you thinking you'd like to put the sun to work at your house? Solar PV systems have many benefits from environmental to long-term costs and reliability. Not only do they use a renewable source of energy — the sun — to reduce air pollution, but they also lower your monthly electric bills and make you less vulnerable to price increases for electricity in the future. The systems also have a monitoring device so you can see the output of the system.

With both the CT Solar Lease Program and the SSRP, it is a simple process to determine whether your home is a good fit for a solar PV system. An approved contractor will do an assessment of your home, roof and electricity usage and will submit all the rebate paperwork for you. For more information, go to <http://ctcleanenergy.com/CleanEnergyIncentives/tabid/57/Default.aspx>

Maybe you aren't ready to go solar or your home isn't a good fit. You can reduce your energy bills by weatherizing your home and taking advantage of state and federal residential energy efficiency incentive programs. To find out more, visit:

www.infoline.org/informationlibrary/Documents/EnergyConservationIncentives.asp

CL&P Customers: www.cl-p.com/home/saveenergy/rebates.aspx

UI Customers: www.uinet.com — type in search "home energy solutions"

Tools for Schools Makes the Grade



The new school year is in full swing.

While students and teachers are geared up for learning, school officials and parents are also thinking about health issues within the school buildings.

Children and staff may be exposed to a number of indoor environmental pollutants like poor ventilation, mold, fumes from cleaning products, and pesticides. For children with asthma, it can be serious. Nationally there are 14 million missed school days a year due to asthma, so it is very important to reduce asthma triggers

in schools. And, the problem is widespread — 70 percent of Connecticut schools have indoor air quality problems. The fact that schools have budget problems makes this more difficult to tackle.

Fortunately, there is a hands-on solution that has been shown to really help — the **Tools for Schools (TfS)** program, managed in Connecticut by the Department of Public Health (CT DPH). Schools form a building team made up of administrators, parents, school nurses, teachers and custodians to investigate potential indoor air hazards. Short- and long-term strategies are then put into place to address the identified issues. Many of the solutions are no- or low-cost, yet very effective.

Does it work? Ted Wyslocki, school nurse at the Chester Elementary School, reported a drop in asthma-related office visits: from 463 the year before TfS, to 265 after its first year of implementation.

“We used the TfS program to document the major problems and recommend solutions. We worked with the administration to make some changes — carpet removal was a big one,” reports Ted.

Other school districts have reported similar improvements. JoAnn Duncan, a parent from Ridgefield reports, “I was a parent on the TfS team at one of the middle schools in my district when a problem with mold arose in a newly constructed connector. The team was able to make suggestions, meet with administrators, make sure this part of the building project was corrected by the contractor and seen through to completion. This was a great example of how the TfS program works in difficult situations.”

Connecticut has taken the lead in helping schools adopt TfS. State law requires all schools to have an indoor air program, and TfS has been officially endorsed by the CT Departments of Public Health and Education. There is also a statewide consortium (www.csirt.tfsiaq.com) that provides assistance to school districts. So far, more than 780 schools have adopted TfS. To see if your school district has TfS, go to the Connecticut map at www.ct.gov/dph/LIB/dph/Environmental_Health/EOHA/pdf/tfs_map.pdf.

So, what can you do to help your local school get an “A” in indoor air quality? First, check to see if your school district has TfS and, more important, make sure it is keeping up with the program. Contact the school office and ask for the name of the TfS building team coordinator. Then, suggest that the district get “refresher” training or additional training on green cleaning — both available free of charge by contacting CT DPH at 860-509-7740 or www.ct.gov/dph.

Your school will be on its way to making the grade!

Recycling Rundup

Roll out the Green Carpet



Is your family room carpet showing signs of too many parties and pet accidents? It may be time to replace it — but with what? You'll be floored by your "green" options!

Many people replace carpeting simply because it's dirty. Ask yourself before you go through the expense of removing and disposing it whether a thorough cleaning would extend the life of the carpet. If so, this may be the "greenest" thing you can do. (See **Ask Eartha** on environmentally-friendly ways to clean carpets, page 7.) But if it's beyond cleaning, read on.

What are the environmental and health issues?

The fiber face of synthetic carpeting is made from nylon, olefin (polypropylene) or polyester and the backing is usually made from more petroleum-based products, such as SB latex, polyurethane, or polyvinyl chloride (PVC). The fiber face and backing, as well as the adhesives, dyes, fire retardants, stain-proofing and other treatments the carpet receives during manufacturing, can off-gas harmful chemicals. These chemicals can cause allergic reactions, breathing and other health problems in sensitive individuals. Disposal of carpeting is a significant issue that the industry association, **Carpet America Recovery Effort (CARE)** (www.carpetrecovery.org) is trying to address. Recycling carpeting is difficult and expensive due to identifying, processing and separating the face fibers from the backing, and then reprocessing them. In Connecticut, there are no recycling options for the homeowner and few for businesses.

So what are your eco-friendly options?

If the carpeting is right on top of the subfloor, consider replacing it with wood flooring that is sustainably produced or salvaged, natural linoleum, bamboo, cork or even recycled tile.

Carpet tiles are another option — they aren't just for commercial spaces! The advantage of carpet tiles is when a section becomes damaged or badly soiled, it can be replaced without removing the entire surface. You can also lay them down with non-toxic adhesives. These alternatives can be more expensive, but long term, these materials are more durable and add value to your home.

Is there a hardwood floor lurking under that carpeting? Lucky you! Think about cleaning or refurbishing the floor and replacing the wall-to-wall carpet with an area rug instead. The advantages of an area rug are lower cost, the ability to turn it to prevent wear in heavy traffic areas, and easier cleaning.

Still planning to buy new carpeting?

First check the Carpet and Rug Institute's Green Label program (www.carpet-rug.org). Carpeting, pads (also called cushions) and adhesives are tested to identify products with very low emissions of volatile organic compounds (VOCs) and little or no off-gassing. This website also has a host of information about types of fiber, rug construction, and the appropriate type of carpet to use.

Green choices have never been better or easier to find. Major carpet manufacturers all have products labeled as “green select” and the carpeting can have a recycled content from 20-80 percent; padding is being made from recycled mattresses or furniture foam.

Some features of a green carpet are:

- The fiber face is made from —
 - recycled content fibers — from soda bottles (yes, we did say soda bottles!), recycled Type 6 nylon, or other recycled content
 - renewably sourced polymers (such as corn sugar)
 - wool — sustainable, biodegradable and long-lasting, but expensive
 - sisal, sea grass, hemp and other plant fibers — durable with interesting textures
- The backing is made from recycled materials, PVC, and VOC-free
- The padding (cushions) is made from recycled or natural materials (such as wool)
- The adhesive for seams, if needed, is water-based, non-toxic and free of VOCs
- It was manufactured in an environmentally sustainable way.



What can I do with my old carpet?

Currently there are no companies in Connecticut that accept carpets or rugs for recycling from residents. Check with your town about disposal. Some may have specific requirements, like cutting it up into smaller pieces.

- If your carpets and rugs are clean and in very good condition, consider donating them to a thrift shop or to a building materials reuse center. Call beforehand to see if they will accept them. (www.ct.gov/dep/recycle — type “ReUse Centers and Material Exchanges” in search box.)
- If part of the carpet is still in good condition, consider having the edges bound and using it as an area rug.
- Use clean pieces of the old carpet as floor mats for the basement or garage, floor pads for your car or truck bed, for your pet’s house or carrier, or kitty scratching post.
- Do you know of a local archery club? It may be able to use layers of carpeting for targets.
- Use pieces of carpeting under furniture to keep it from damaging a floor.

Remember, you will live with your new carpet for a long time — your family will play on it, your pets will sleep on it. Make sure it is the healthiest and greenest carpet you can afford.



Did you know?

About 50 2-liter soda bottles are used to make a square yard of recycled-content carpet fiber.



What's NEW in P2?

Environmental Wins from 2009 Legislative Session:

The legislative session wrapped up with some “wins” for pollution prevention:

- Plastic water bottles were added to the list of beverage containers that are required to be recycled and carry a 5-cent deposit. The legislation had an effective date of March 1, 2009, but the deadline was extended to October 1, 2009. (PA 09-2 starting with Section 17, see www.ct.gov/dep/recycle for extension memo)
- To improve air quality in schools and make them healthier places for students, teachers and staff, schools will be required to use environmentally preferable “green” cleaning products. (PA 09-81)
- The chemical Bisphenol-A, commonly called BPA, used to make plastics (mostly #7 and some #3 plastics) is banned from children’s products and reusable food containers and jars sold in Connecticut after October 1, 2011. (PA 09-103)
- The ban on the use of pesticides at day care facilities and elementary (K-8) schools has expanded to include family day cares. The deadline on the application of pesticides on certain school grounds pursuant to an IPM plan was extended until July 1, 2010. (PA 09-56)
- To make streets and roads safer for cyclists and pedestrians, a permanent advisory committee will be set up along with funds to make improvements. (PA 09-154)
- The State Building Code will be revised to include a model energy code and green building standards for certain new construction or renovation projects. (PA 09-192)
- Smart growth development is defined and smart growth principles must be incorporated into future state, regional and local plans of conservation and development. (PA 09-230)

To read the full text of the legislation, visit www.cga.ct.gov and search under the public act (PA) number.

For summary of environmental bills by the CT League of Conservation Voters, visit www.ctlc.org/watchlist

Wipe Out

“Just flush it and forget it” is a common advertising message to get you to buy the latest disposable wipes. But DEP and Connecticut’s wastewater treatment facility operators have a different message. Because the wipes (even those marketed as flushable) do not break down fast enough, they can cause clogs at pump stations — resulting in sewerage overflows and expensive repairs. Please help us spread the word — “If it’s not toilet paper, don’t flush it!”

To download a poster or flier, visit www.ct.gov/dep/p2



What's New in P2? Continued on page 7

Ask Eartha

My wall-to-wall carpeting needs to be cleaned but I wonder about using the cleaners sold in stores. I can't tell if they are toxic by reading the labels. But I am also unsure about what the professional cleaning companies use. Should I be concerned and do you have any suggestions?

Carolyn E., Hebron, CT

Carpet cleaning products usually contain very strong detergents and aggressive enzymes and disinfectants — which if used or managed improperly, can harm humans and the environment. Cleaning formulas can also contain dyes, synthetic fragrances, ammonia, polymers, bleaches, and solvents of alcohols, esters, and glycol ethers. Some specialized cleaners also contain various forms of butyl, such as butyloxy ethanol (also known as butyl cellusolve). Exposure to some of these chemicals could result in long term health effects. (source: www.epa.state.il.us)

There are less toxic alternatives to standard carpet cleaners. Some professional cleaning companies offer “green” cleaning options, which

include steam cleaning using high temperatures (up to 260 degrees Fahrenheit) and mild chemical agents. Make sure the carpet is dried thoroughly to prevent mold from forming. Ask the company about their cleaning processes and chemicals before you hire them.

If you want to spot clean your own carpet, you can use simple tried-and-true alternatives such as white vinegar or club soda to clean problem areas. You can also purchase “green” carpet cleaners in stores and on-line. For a list of companies that have commonly available, less-toxic cleaning products, visit <http://informinc.org/homehel.pdf>. For spot removal tips from the Carpet and Rug Institute, go to www.carpet-rug.org/pdf_word_docs/Spot_Solver.pdf.

Eartha answers selected environmental questions. Email your question to judith.prill@ct.gov and watch future issues for your answer.

What's New in P2? Continued from page 6

DEP is Electronically Challenged!



DEP earned an Environmental Merit Award from the U.S. EPA for exceptional leadership in the State Electronic Challenge (SEC). The SEC promotes the greener use and disposal of electronics by state and local governments.

In 2008, DEP purchased 1,870 computer products that were ENERGY STAR or contained fewer toxins and over 1,700 computer items were recycled by companies with a strong commitment to the environment. These measures resulted in:

- An energy savings of nearly one million kilowatt hours or enough power to supply 71 homes annually.
- Greenhouse gas emissions reductions, equivalent to removing 89 cars off the road.
- 15 metric tons diverted from the trash, equal to the waste generated by 8 households.
- 142 pounds of toxic materials, like lead and mercury, prevented from entering the environment.

Want to get your town or agency to participate?

State Electronics Challenge — www.stateelectronicschallenge.net

ENERGY STAR — www.energystar.gov (go to “office equipment”)



Keep it clean!

Dust and dirt wear away carpet faster than you think. Carpet can absorb particles tracked into a building, and dust from any source, that might contain lead or other toxic chemicals. Carpets can also harbor fleas, dust mites, mold and pet dander.

Take these steps to make your carpet last longer and reduce its health impacts:

- Take your shoes off when you enter your home. Use mats designed to trap dirt at all entry ways.
- Vacuum regularly (best to use one with a HEPA filter).
- Clean up spills right away and keep the carpet as dry as possible.
- Use carpet cleaners that are certified by a third party such as Green Seal or EcoLogo.
- Sprinkle baking soda to neutralize odors, let it sit for a couple of hours and then vacuum.

P 2 C A L E N D A R

A SELECTION OF ENVIRONMENTAL EVENTS

October 3, 2009

National Solar Tour

Various locations throughout CT

Tour sites will be hosted by knowledgeable installers, designers, or site owners who will provide information and discuss solar power system details. For information: www.solarconnecticut.org

October 8, 2009

Gypsum Wallboard Recycling Meeting CT DEP Headquarters, Hartford, CT

Join contractors, developers, drywall distributors, haulers, waste facility managers, municipal officials and other stakeholders, and hear from gypsum wallboard recycling businesses and others interested in increasing recycling opportunities. Contact Sherill Baldwin at (860) 424-3440 or sherill.baldwin@ct.gov for more information.

October 14, 2009

What's the Deal? Conference Crowne Plaza, Cromwell, CT

Seminar, sponsored by the CT Power and Energy Society and the CT Business and Industry Association, will identify strategies — from energy-efficient technologies to financial aid — to help companies compete and thrive. Keynote speaker is Gina McCarthy, Assistant Administrator, Office of Air & Radiation, U.S. EPA. To register: <http://ctpower2.org>.

October 17, 2009

5th Annual Environmental Justice Conference UConn School of Business, Hartford, CT

Topics include effects of chemicals on reproductive development, green jobs, drinking water safety, grant writing and more. For more information, contact the Connecticut Coalition for Environmental Justice at (860) 548-1133 or www.environmental-justice.org

October 19 & 20, 2009

Building Zero Waste Communities: Tools to Take Home

Devens Commons, Devens, MA

GrassRoots Recycling Network is sponsoring this conference featuring cutting-edge sessions on municipal recycling, reuse, zero waste, extended producer responsibility, as well as the latest on the waste and climate change connection. To register: www.grrn.org/conference2009/

October 24, 2009

The Green Team CT

Smart Living Center, Orange, CT

Free seminar with geothermal, solar energy and radiant heat specialists who having been working together on green building projects. For more information, contact the Smart Living Center at (203) 799-0460.

November 7, 2009

Backyard Rain Garden Workshop Connecticut Historical Society, Hartford, CT

Learn about using rain gardens for residential stormwater management and take a short walk to the Classical Magnet Rain Garden. This free workshop is open to the public. For more information contact: Mary Rickel Pelletier at (860) 881-5089 maryvrp@parkriver.org of the Park River Watershed Revitalization Initiative or www.parkriver.org.

November 21, 2009

Reduce, Reuse, Recycle Open House CRRRA Trash Museum, Hartford, CT

Visit new exhibits on the 3 Rs, learn how to make your own green cleaners and more. For information, contact the CRRRA Trash Museum at (860) 757-7765 or go to www.crra.org.

Got Questions on Plastics?

www.ct.gov/dph/lib/dph/environmental_health/eoha/pdf/plastics_primer_final.pdf



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