

# Agenda regarding Biggest Loser Energy Conservation Challenge 4/13/10

## Introductions

Attendees: Mike Malmstead, Dave Rodriguez, Greg Kiel, Amy Kester, Larry Roth, Jim Resick, Roger Kanitz

## What is the E-Loser Competition all about?

- a) Jim Resick, see Brief Concept Summary
- b) Larry Roth, see Frequently Asked Question

## Overview of Challenge Program

- a) Program that encourages actual home/small business energy conservation and education in a fun and attention grabbing manner that can be seen by the wider community.
- b) Challenges can take the form of volunteers that personally challenge themselves and/or the collective volunteer group, or in a more structured group to group version.
- c) Volunteers are benefited by:
  - Being supported to get baseline energy audits performed
  - Obtaining streamlined funding opportunities to implement the most cost effective recommendations
  - Being placed in a lottery for a more major test case home improvement provided by sponsoring groups (sponsors willing).
- d) Potential opportunities to expand program in ways that each community finds to be beneficial

## Key Elements

- a) Challenge details need to be worked out and proved in one or two test case satellite programs; test sites likely need to be in self contained communities to minimize implement limits.
- b) Documentation web-site needs to be able to easily permit volunteers to input both electrical and gas usage from potential different Utility vendors on either a monthly or yearly basis so that reductions in energy usage can easily be tracked and verified
- c) A network of support in each test community is established.
- d) Homeowners in community become aware of funding resources that each community offers to them for this type of home improvement.

## Types of Challenge to Consider

Plan for two types of volunteers, the folks that will enter for a short term month by month challenge, and those willing to take on a yearlong documentation challenge.

- a) An individual challenge to reduce personal home/small business energy use by 5%, based on a yearlong energy tracking compared to baseline info.
- b) A challenge between two groups of individuals willing to support the year long data entry, with the larger combined total year long energy reduction % group being the winner.
- c) A personal challenge for a short term (month or season) where the available data of all volunteers is ranked and each person is challenged to drop their energy use ranking in the group by 5% as compared to the rest

### **Measurement & Documentation**

See hand-outs of web-site elements viewed as key to making program effective, easy and fun. Key point here is that site needs to be able to draw on information from different utility vendors so that information can be compared objectively across a number of communities; is WPPI and Focus on Energy the common resource needed?

### **Funding Potential**

One of the first comments that heard from citizens when the topic of energy conservation is raised is that it cost more money up front that many people are willing to spend on the effort.

- a) The \$300 window of audits is not explored to locate the existing funding available
- b) The potential of utilizing the refunds from Focus on Energy as collateral for short term loans to implement high impact home improvements should be explored
- c) Costs of improvements are not spread across the life of the home, causing the existing owners to bear full cost up-front; folks planning to move thus are reluctant to implement the changes (reference type PACE programs)
- d) Community or neighborhood group efficiencies of scale for programs are not used
- e) Available vendor supported loans for high cost items like geo-thermal heat wells for individuals or neighborhoods might be offered

It would be great to clarify what exists and what we might do to facilitate energy conservation as part of this program.

### **Community Benefits**

- a) Homes in the test group get energy audits
- b) Funding programs for citizens are clarified and communicated ; any disconnects between available funding and tax, installation deferral costs are streamlined
- c) Low cost energy conservation improvements are completed and documented, and made visible to the greater public
- d) Citizens see benefit of sustainability in concrete positive personal results
- e) Utilities and community leadership viewed as working to benefit community at large; use challenge as a vehicle to education wider community on energy conservation opportunities
- f) Local jobs (training in) energy conservation work are encouraged along with improved sustainability of community

### **Agreement Question on Path Forward**

- a) Are Menasha and Menasha Utilities willing to be one of the beta sites for this effort? (There is one neighborhood in Appleton interested in participation, working with The Sustainable Fox Valley Initiative)
- b) Might WPPI be approached to help develop the web-site for challenge data collection and comparison for use by any community in the area?

### **Implementation Needs?**

All...

Fox Valley Energy Challenge  
A Brief Concept Summary  
By Jim Resick, Outagamie County UW-Extension  
And Roger Kanitz, ECOS-Fox Valley  
For the Ad Hoc Energy Challenge Team

Discussions on “what can we do to encourage energy conservation as a community” have sprung in part from receipt of a sustainable neighborhood grant by Sustainable Fox Valley, and from the October 22, 2009 Sustainability Action Summit held at Heckrodt Reserve in Menasha. While there are government, nonprofit and utility programs that support building energy assessments and implementation of efficiency projects, there remains one great barrier to their broader use: human nature. Even heads of households who are aware of the potential benefits of energy conservation often need extra incentives to actually change their consumptive behavior. Proposed here is a community-based incentive package that uses cooperation, competition, organization, measurement and rewards to produce real and lasting energy conservation among residential, business and nonprofit energy consumers.

The Minnesota Energy Challenge provides one example of how communities can organize to address energy conservation (see <http://www.mnenergychallenge.org/>). It has demonstrated that businesses, schools, neighborhoods, churches and even whole municipalities will compete for recognition of energy conservation efforts. The community building that comes with families, city blocks and neighborhoods coming together is reinforced by the joy of cooperating for a common purpose. Cash or other valuable gifts can reinforce conservation behavior even more strongly, thus suggesting some type of “Biggest Loser” competition. Households may compete against households, block against block, neighborhood against neighborhood, church against church, etc. One thought is that named eco-municipalities and other municipalities can enter into this challenge. An energy consumption tracking software – such as EPA’s Energy Star® Portfolio Manager – may be used to help individual units (households, businesses, etc.) measure conservation progress and verify results.

As with all such endeavors, education on “how to” implement conservation practices would enable participants to act upon their motivation. One idea already discussed is to stage a community energy expo, featuring hands-on learning opportunities, fee-based energy contractors, etc. There is also room for citizens to teach their fellow citizens, one-on-one or in small groups, about energy conservation; this type of peer-to-peer learning can be among the most powerful forms of learning.

Typical of most social movements and community initiatives, some funding will be needed to support these activities. Corporate sponsorships or local foundation grants may be sought. Funds garnered by municipalities from federal stimulus programs may be requested (although these activities generally need to be named in the original grant proposal in order to be funded). The concept may benefit from in-kind assistance, such as use of equipment, staff and volunteers to establish energy consumption baselines for buildings. We will need to understand what programs are available to the various targeted groups, including neighborhoods, homes, nonprofits and businesses. We will want to address single-family households, multi-family housing, churches, schools, and small, neighborhood businesses.

Moving this concept forward will benefit from regional communication and networking. Groups including ECOS-Fox Valley, Sustainable Fox Valley, and East Central WI Regional Planning Commission can individually or collectively provide the organizational glue to keep the process going.

#### Some Considerations in Planning & Implementing This Concept

1. How does this concept fit with the existing plans and priorities of potential partners? We need to contact Focus on Energy, Fox Valley municipalities, state and county agencies, gas & electric utilities, community-based organizations, building & remodeling associations, and educational institutions for expressions of interest in the concept.

2. How will we measure how much buildings have saved in energy costs over time? We will need to research the effectiveness of various energy consumption tracking systems, such as EPA Energy Star Portfolio Manager. We need a system that is easy to use, accurate, useful for comparisons across utility district boundaries, and fair in its assessment of total energy consumption. We will need to establish an energy consumption baseline for each participating unit, using past utility records.
3. How may we incentivize the Biggest Loser competition? We will need to research and catalogue existing financial assistance programs that target households, business, and other user categories. We will need to carefully approach utilities, foundations, local governments, and/or financial institutions about underwriting the competition. We will need to understand the new community energy efficiency bonding program of US Department of Energy, and other means of innovative financing.
4. How will we establish what energy efficiency/conservation practices are most able to deliver the best “bang for the buck” for participating units? We will need to explore practical, cost-effective means of conducting energy home assessments (audits) of buildings. Education will be needed on how to analyze the financial return of various energy efficiency practices to building owners. We may need to employ strategies from the “community based social marketing” experts to encourage adoption of conservation behaviors, investment in capital projects, and re-alignment of community norms.
5. What organization(s) are capable of short-term organizing and ongoing coordination around this concept? We need to consider grant-writing skills and capacity, staffing/volunteer levels, educational missions, and connectedness (networking ability) of various groups.

#### Potential Benefits to Project Stakeholders

- 1) Community Citizens
  - a) Citizens/small businesses in volunteer group see physical improvements and economic benefits in community
  - b) Base-line benefit would be home energy audits and the energy tracking of selected homes that could be given community visibility
  - c) Selected homes would be drawn by lottery to a major make-over and be the main program educational focuses (like Holmes on Homes with long term follow-up)
- 2) Energy Providers
  - a) Energy Providers use existing funds to develop concrete examples of benefit that implementing energy saving suggestions offers their clients
- 3) Community Development Managers
  - a) Homes in community are improved so citizens see city hall sustainability as a positive
- 4) Businesses
  - a) Area home remodeling and insulation contractors get advertising connected to projects which show concrete benefit to the home owners in the community
  - b) Banks can show community that unique financing options can be developed to foster regional sustainability; linked to Focus on Energy and city bond capabilities
  - c) Educate the public (advertise) by helping with hands on training of students and Habitat type volunteers
- 5) Elected Community Leaders
  - a) Positive results from projects will provide leaders citizen support to support other sustainable activities in the community

# E-Loser Frequently Asked Questions

## Why a competition?

Saving energy and becoming efficient in how you use it can be fun just like the TV show the Biggest Loser! To make it fun, a competition against your old energy use habits and against other households is just getting started. We even hope to let one group of folks to compete against another group to see who can use the least per household and who can decrease their energy use the most.

## What does the individual need to do?

As a part of the startup process, the individual will be provided with:

1. A competition ID number (almost like an account number that is unique to your home)
2. An organization number that identifies you as a member of one competitive organization or another
3. The website address to log onto for the competition.

The individual will be asked to make a choice between entering information about only this month's energy usage or entering a year's worth of energy usage (based on their own energy bills or on the energy provider's history which is available to the customer on request).

If the individual chooses a "quick start" to the competition, they will need to key in:

1. Their competition ID number, their organization number, an estimate of the size of their home or apartment, their zip code, and 12 months worth of monthly kilowatt hours used.
2. Each month going forward they will need to sign on to the website again and enter that month's energy usage. In return, they will get immediate feedback about how they compare to:
  - i. Their own energy usage from 12 months ago.
  - ii. Their own energy usage as compared to the average of all competitors in the same size home.
  - iii. Their own usage as compared to the rest of their organization.
  - iv. Their own usage as compared to the rest of the zip code with the same size home.

If the individual chooses the "easy start" option to the competition, they will need to key in:

1. Their competition ID number, their organization number, an estimate of the size of their home or apartment, their zip code, and the energy used in the most recent month bill.

2. Each month going forward they will need to sign on to the website again and enter that month's energy usage. In return, they will get immediate feedback about how they compare to:
  - a. Their own energy usage as compared to the average of all competitors in the same size home.
  - b. Their own usage as compared to the rest of their organization.
  - c. Their own usage as compared to the rest of the zip code with the same size home.

## **What does the organization need to do?**

The competing or sponsoring organizations need to provide:

1. opportunities for promoting the competition (getting people committed),
2. an incentive to compete (a prize or reward for the individual, the team, or the ability to reward the team's favorite organization)
3. the means for publicizing progress toward a goal, competitive results, and the final winner of the competition.

## **What will the individual see each time they are on the website?**

The individual can go to the website at any time and review how they are doing for a given month within the competition. They can also enter their energy usage at any time of the month.

We have had several discussions with the Minnesota Energy Challenge organization that emphasizes signing up as many people as possible to reduce energy usage and provides extensive information about how to reduce your energy usage. There may be room for sharing with this organization in the future, particularly around the marketing of the competition.

## **How do team competitions work?**

A limited time duration for the competition should be established. Probably 3 months to start. This will allow for one or two months of establishing the competition and then declaring a winner. Depending on the public's response, there may be room for reissuing a challenge and creating a longer competition to follow. Regardless of the length of the competition, the individual will be allowed to continue to track their energy usage. The competition between organizations will be reported to each organization once per month and it is then up to that organization how they choose to publicize the results.

## **Who is the winner and how are they measured (all prize winners are subject to a verification process)?**

Suggested “quick start” individual prize winners would include:

1. Greatest overall reduction compared to last year.
2. Greatest percentage reduction compared to last year.
3. Prizes could be specific to the home size involved (under 1200 sq ft, 1200 – 2200 sq ft, over 2200 sq ft)
4. Everyone that reduces usage by x% qualifies for an energy gift certificate lottery or drawing.

Suggested “easy start” individual prize winners would include:

1. Lowest total usage during the competition time period.
2. Every household with energy usage less than average household is eligible to be “picked out of a hat” as the winner of an energy gift certificate.

## **What is in it for the individual?**

It is important for this to be fun. Each month the results screen will be different in some way. It will look and sound different depending on what the most recent results are. There may be a smiley face or a musical fanfare played....you just never know!

## **How will this all get started?**

Website addresses have already been reserved and the first steps of development design have begun. The web development company involved has over 10 years of experience and developed hundreds of websites. Testing could begin as soon as June and is most likely going to need the help of a small neighborhood organization or a few local students willing to enter some data.



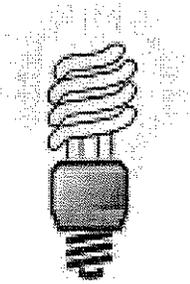
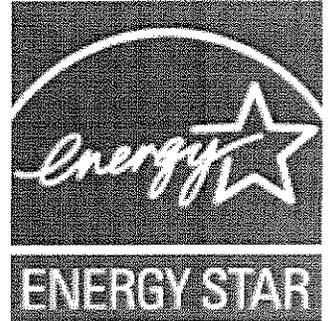
# In-Home Energy Audit Tips To Save You Money



<sup>UW</sup>  
**Extension**  
Cooperative Extension

## Top 5 Ways To Save Energy

1. When needing to purchase any electronics or appliances always look for an ENERGY STAR model.
2. Clean all appliances and electronics as often as necessary to keep them more energy efficient.
3. If there is a filter...clean it or change it often to keep appliances and electronics running more efficiently.
4. Turn off and unplug electronics/appliances when not in use. Many appliances especially computers, televisions and VCR's draw power even when they are turned off or in sleep mode.
5. Replace incandescent bulbs with new compact fluorescent light bulbs.



### Did you know...

A typical compact fluorescent light uses only 25% of the electricity of an incandescent bulb to produce the same amount of light. So...if every incandescent light bulb in our country were replaced with a CFL, our total electricity need would drop by a whopping 15%-and close to 5% of U.S. greenhouse gas emissions would be eliminated.

Even replacing just one bulb with a CFL makes a big difference:

Where electricity is produced from coal, each CFL will cut CO<sub>2</sub> pollution by about 1,300 pounds over its lifetime.

If every household in the U.S. replaced only one incandescent light bulb with a CFL, the carbon dioxide pollution equivalent of one million cars would disappear.

Environmental Law & Policy Center  
[www.elpc.org](http://www.elpc.org)

## Let's Start with the Kitchen

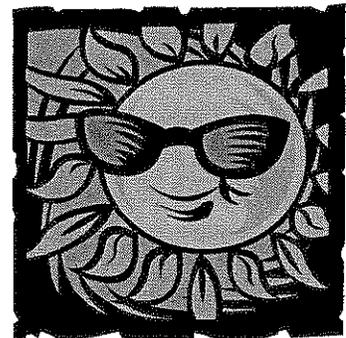
- Check the seal on your refrigerator door by closing a dollar bill in it. If you can pull the bill out easily then it is time to replace the gaskets or unit. (Dollar Bill Method)
- If you have a second refrigerator or a freezer, consider getting rid of it. Each can add more than \$100 to your energy bill every year. If you need the space run them only for the special occasion and holidays as needed.
- Older refrigerators and freezers can use 2 to 3 times more electricity than ones that are 10 years old or less.
- Set the refrigerator temperature between 36 and 42 degrees F and set the freezer between -5 and 0 degrees F. Don't overload the refrigerator or freezer, cold air needs to circulate.
- Don't stand in front of an open refrigerator! With each opening 30% of cooler air escapes.
- Don't peak inside the oven! Each time you open the oven door the temperature drops 25-50 degrees. Avoid lifting pot lids for the same reason.
- If you have a self-cleaning oven, use this feature immediately after cooking while the oven is hot.
- Once again try the dollar bill method to check the oven seals too.
- Try to use the oven during cooler times of the day if possible.
- Use copper bottom pots and pans. Copper bottom pans heat up faster than regular pans.
- When cooking, use smaller appliances because they will use less energy than the oven.
- Use the microwave as much as possible because it is a shorter cooking time.
- When running the garbage disposal use cold water instead of hot water, which takes energy to warm the water. Cold water also solidifies the grease to keep it easily moving through the garbage disposal and the pipes.
- Only run the dishwasher when it's full and air-dry the dishes instead of using your dishwasher's cycle.
- Skip rinsing the dishes before loading them in the dishwasher unless you use cold water to rinse them.
- Use the shortest cycle that will properly clean your dishes; shorter cycles use less hot water and less energy.

# Laundry Room

- Use the warm or cold water setting on your washer for your clothes. Use only hot water for when the greatest cleaning is needed. There are soaps made for cold setting.
- Rinse your clothes in cold water; the temperature has no effect on cleaning.
- Always run full loads in both the washer and the dryer.
- Adjust the water level for the size of your load.
- Drying laundry excessively uses more energy than is needed and is hard on fabrics.
- Clean the lint filter after each load! Also periodically check the air vent and exhaust hose for clogging. Keeping them lint free also prevents a fire hazard.
- Use the power of the sun to dry clothes as weather permits.

# Lighting

- Use ENERGY STAR CFL bulbs. These light bulbs will last longer and use up to 75% less energy than standard light bulbs. You can save up to \$60 per year on your electric bill if you replace the 5 most frequently used light fixtures with CFL's.
- Make sure to properly dispose of CFL's at participating hardware stores or the county Solid Waste office (832-5277).
- What if a CFL breaks? Pick it up right away, scoop contents and put in a zip-loc bag, place in garbage, and wash hands. CFL's contain a very small amount of mercury.
- Use as much natural lighting as possible such as curtains, shades, skylights, or solar panels.
- Plan and position your lighting in each room.
- Turn off lights when not in use.
- Adjust light level with fixtures having different settings, such as dimmer controls, high/low switches, or three way bulbs.
- Keep bulbs and fixtures clean, but do not clean them when they are hot or plugged in.
- Keep lamps away from thermostat, since this can cause furnace to run less or air conditioning to run more than needed.
- To control outdoor lighting, use motion sensor lighting, fixtures with photocell, or use a timer for dusk-till-dawn operation.



## Water Heaters and Water Usage

- Set the temperature to 120 degrees F. **For safety reasons, turn off the water heater at the circuit breaker/fuse before changing the temperature.**
- If your water heater is more than 15 yrs old, purchase an insulating wrap.
- Insulate hot water pipes with half-inch foam or pipe tape.
- Repair dripping faucets promptly. (One drop a second wastes up to 48 gallons a week.)
- Install a water softener to prevent mineral deposits from coating the elements and reducing heater efficiency.
- Install water saving devices such as low-flow showerheads and faucet aerators.

## Cooling, Central Air, and Air Conditioners

- Change your thermostat settings to 76 degrees F when at home and then higher when you go away. Can save you 10% or more!
- Get your cooling unit tuned up every other year by a qualified heating contractor.
- Keep the condenser and filter clean. Also clean the filter monthly and replace as needed. (Your central AC uses the same filter as your furnace.)
- Keep the sun out by closing the blinds/shades to keep home cooler.
- Cool only the rooms in daily use, close unused rooms to keep cool air where it is needed.
- Keep air vents clear to allow air movement into the room.
- Ventilate your attic with the help of a qualified heating/cooling contractor to keep the house cool during the summer months.
- Keep the air conditioner unit in a central location that is central to the space being cooled. Reposition the unit out of the sun.
  - Seal the unit to prevent warm air from coming in.
  - Close the fresh-air vent when room is being cooled. Open when the outside air is cooler to let in fresh air.
  - When first turning it on, set the thermostat to normal or medium.
  - Remove the unit at the end of the summer months and if you must leave it in cover the outside of the unit with a weatherproof cover. Caulk any cracks around the unit.
- Use fans, ceiling fans, and oscillating fans with your air conditioner to help circulate the cool air, this allows you to raise the temperature and still be comfortable.

## **Heating**

- Clean your furnace filters monthly and replace as necessary.
- Insulate your attic and walls properly to keep your house warm see blue resource sheet.
- Weather-strip and/or caulk all areas of noticeable leaks around windows and doors.
- Set your thermostat at 60 degrees F when you are sleeping or not home and 68 degrees when you are home. If you are going away for an extended period of time turn down thermostat but never lower than 50 degrees.
- Let the sun's rays in to help heat the home.
- Use a portable space heater to heat one room. Always follow the manufacture's safety instructions when operating space heaters.
- Use the fireplace sparingly, since it can draw out more heat then it produces. Close the flu to eliminate drafts when not in use.

## **Humidifiers and Dehumidifiers**

- Use a humidifier in the colder months to make you feel warmer, about 20-40% relative humidity is recommended.
- Remove moisture from the air with a dehumidifier in the warm/humid months. Less humidity makes you feel cooler. Place away from walls and bulky furniture.
- Check for frost buildup on dehumidifier coils if temperatures are less then 70 degrees F. If so turn the unit off until the frost melts and the room is warmer.
- Make sure to clean the unit by dusting or vacuuming the dehumidifier at least once a year. Do so before plugging it in for first use of the season.

**Now think of what you can do Today, this  
Week, this Month, and this Year!**

Information from: Focus on Energy, WE Energies, American Council for an Energy-Efficient Economy, and PowerHouse presented by Alliant Energy.