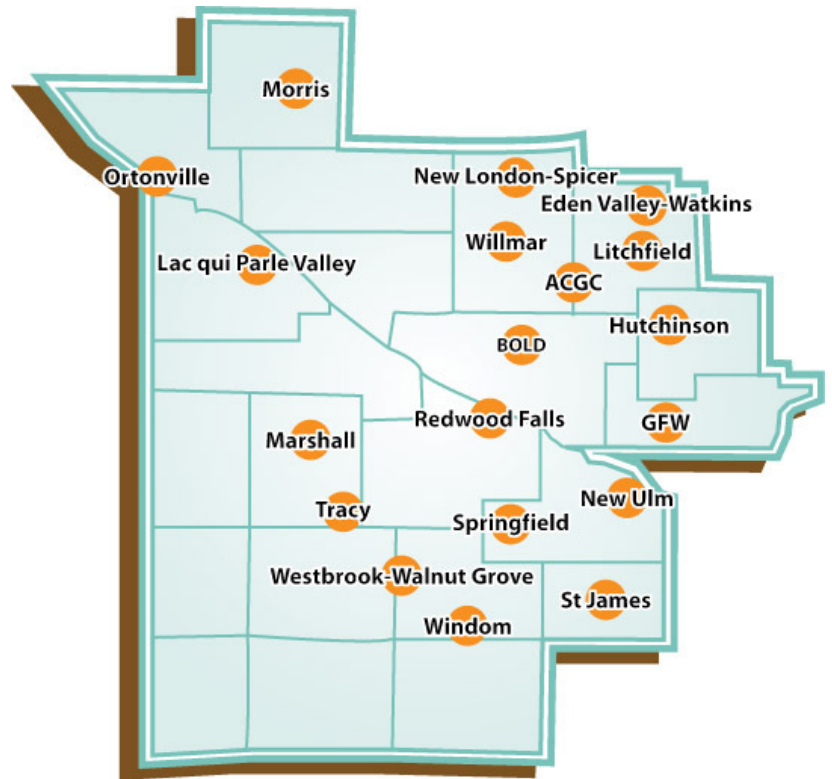




2009-2010 YES! Team Energy Action Projects



Special thanks to 2010 YES! Funding Partners

- ❖ Minnesota Renewable Energy Marketplace: Alliance for Talent Development*
- ❖ Southwest Initiative Foundation
- ❖ Southern Minnesota Initiative Foundation
- ❖ University of Minnesota's Regional Sustainable Development Partnership
- ❖ Great River Energy
- ❖ Outland Renewable Energy

"This workforce solution was funded in part by a grant awarded under Workforce Innovation in Regional Economic Development (WIRED) as implemented by the U.S. Department of Labor's Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use by an organization and/or personal use by an individual for non-commercial purposes is permissible. All other uses require the prior authorization of the copyright owner."

Atwater-Cosmos-Grove City High School Grand Prize & Energy Conservation Awards - PWELC

Energy Conservation:

- Within the school, reduced hallway lighting and changed behavior to save 5% of the school's electricity consumption, with a future goal of 10%
- Achieved estimated cost savings of around \$5000 annually, according to the school's business manager
- In the community, distributed 274 energy-saving kits to households, for a potential savings of 56,444 kWh/year when fully utilized

Energy Awareness & Education:

- Reached 400+ elementary students and 50 adults with Energy & Environmental Education
- Reached 400 5th -12th grade students and 40 adults in "Switch to Green" event
- Created education kits, displays, and activities to teach about energy conservation; solar, wind, hydro and biomass; and recycling, composting, and reusing

Waste Reduction:

- Achieved 90-95% recycling at high school
- Collected electronic waste, impacting 45 families
- Exchanged 100 disposable plastic bags for a reusable bag, impacting 60 families

Carbon Offset:

- Planted trees on the school's west side to off-set carbon and invest in long-term windbreak

Community Supporters: Lake Country Wind Energy, Creekside Organic Materials Processing Facility, Peaceful Thymes, Vern's Food Co, Meeker Cooperative Light and Power, ACGC North Elementary Parent-Teacher Association, ACGC South Elementary Parent-Teacher Association



ACGC YES! team member hands off a solar powered jumping cricket to eager elementary student.

BOLD High School

Energy Conservation:

- Did research and planning to install energy efficient exit signs

Energy Awareness & Education:

- Purchased 5 watt meters to illustrate energy consumption and phantom loads to community

Community Supporters: Valley Electric

Eden Valley-Watkins High School

Community Involvement Award - PWELC

Renewable Generation:

- Researched feasibility of installing photovoltaic solar panels on school grounds, then wrote and received a Schools Cutting Carbon grant for their proposed project
- Worked closely with DT Renewables to plan the solar installation project
- Received donations from 10 businesses and 5 individuals related to the solar installation

Energy Awareness & Education:

- Educated all 1st and 2nd graders in the school system about energy sources, conserving energy at home, and recycling
- Sent letters to elementary student parents and published articles in the local newspaper
- Laid foundation for “Triple-Purpose Solar Demonstration,” which will teach students, teach community, and generate electricity
- **Planned and collaborated on a community education event in May, in conjunction with the solar panel installation**



YES! teams began planning their Energy Action Projects in a step-by-step process that included asset-mapping.

Community Supporters: DT Renewables and 9 additional businesses

Gibbon-Fairfax-Winthrop High School

Economic Potential Award - PWELC

Energy Conservation:

- Researched feasibility of green-roof installation and met with a green-roof installation company
- Worked within school to improve overall energy efficiency by installing vending misers and planning for installation of LED exit signs

Energy Awareness & Education:

- Promoted a “YES! Tip of the Week” on school website
- Toured Great River Energy’s LEED-certified headquarters
- Completed extensive research regarding energy conservation and renewable energy by communicating with experts in various fields
- Provided students with relevant opportunities to prepare for life outside of high school

Waste Reduction:

- Surveyed middle school students about recycling
- Increased recycling opportunities in the GFW Middle School to match those at the high school
- Purchased equipment to begin a composting program

Community Supporters: Great River Energy, Bachman’s

Hutchinson High School

Waste Reduction:

- Developed major project titled “Collecting Others Muck; Producing Our School’s Tomorrow (COMPOST),” with the goal to reduce meal-time garbage at Hutchinson High School by 50%
- Worked closely with Creekside Composting Facility to plan the project

Energy Awareness & Education:

- Surveyed students and teachers about composting awareness
- Created materials for a community-wide composting marketing campaign, including public service announcements, radio ads, t-shirts, posters, and bumper stickers
- Kicked off school-wide composting awareness program on National Compost Week
- Set goal of informing and educating 100% of the school population about waste-reduction through composting of organics

Community Supporters: Creekside Organic Material Processing Facility

Lac qui Parle Valley High School 2nd Prize Award - PWELC

Energy Conservation:

- Delivered 416 CFL bulbs to 44 community households, with a potential savings of \$12,480 in electricity consumption over the life of the bulbs
- Provided community members with 7 smart-strips to eliminate phantom loads

Energy Awareness & Education:

- Hosted a community phantom load workshop
- Distributed energy conservation information at Farm and Home Show and the school’s Parent Expo

Waste Reduction:

- Worked with representatives from city, county, state, and economic development to improve recycling opportunities in area communities, both in towns and rural areas
- Held electronic waste collection day in two communities
- Continued to improve recycling in the school and at special events
- Gave away and promoted the use of reusable shopping bags
- Continued researching and implementing small-scale composting, with a goal of expanding and reducing food waste in the school cafeteria

Local Foods:

- Grew greens for the school salad bar in a winter greenhouse

Community Supporters: Ottertail Power, Eul’s Hardware, and 8 additional businesses



YES! students construct and test demonstration solar panels at Winter Workshop.

Energy Conservation:

- Used watt-meters to study energy consumption around the school, converted the calculations to pounds of coal, and posted findings near appliances

Renewable Generation:

- Laid groundwork for upcoming installation of solar thermal panels on portable classroom

Energy Awareness & Education:

- Held “Green Week” at LHS, with a “Get Caught Carpooling” day, a t-shirt design contest, local cheese in the school cafeteria, and a “green” lesson plan contest among teachers
- Provided energy and environmental tips through announcements and bulletins
- Read to 1st grade students
- Coordinated with construction technology class for assembly and installation of solar panels

Waste Reduction:

- Expanded recycling opportunities within the school
- Met with county officials, a sanitation company, and the school business manager regarding recycling

Community Supporters: West Central Sanitation, Meeker County Environmental Services, WalMart, First District Association, Three Seasons & More, Cricket Meadow Tea Shoppe, Buyanvil.com, Dragon Apparel



Students experiment with infrared cameras while learning about energy audits.

Energy Conservation:

- Collaborated with Marshall Area Environmental Education Team to implement “Biggest Reducer” Energy awareness campaign
- Provided 6 households with 2 low-flow shower heads, 12 CFL bulbs, a smart strip, and a programmable thermostat

Energy Awareness & Education:

- Worked with 4H to teach the “Power of the Wind” curriculum to 20 5th and 6th grade students
- Directly coordinated with a Western Community Action home energy auditor for team members to understand how home energy audits work
- Conducted home visits about energy reducing and recycling for 6 “Biggest Reducer” households

Carbon Offset:

- Planted an acre of native prairie grass

Community Supporters: Lyon County Extension/4-H, Marshall Area Environmental Education Team, Southwest Minn State University, Marshall Municipal Utilities, Lyon-Lincoln Electric, Southwest/West Central Service Cooperative, Marshall Public Access, Western Community Action



Morris Area High School

Energy Conservation:

- Monitored school energy consumption using specialized software
- Worked closely with school facilities management team to address electricity spikes through management and behavior
- Achieved an estimated annual energy savings of \$2000 through switch cover changes and weather stripping

Energy Awareness & Education:

- Made “Reduce/Reuse/Recycle” posters and updated them weekly with tips and facts
- Held a school and community Reduce/Reuse/Recycle Awareness Week, with daily themes, displays, lessons, games, daily announcements and lunch-hour programs, and other activities
- Promoted recycling at school events through announcements and posters

Waste Reduction:

- Analyzed data from a community-wide survey about recycling and waste reduction
- Researched and laid groundwork for a community “sell/buy/trade” website
- Completed a third annual electronic-waste collection
- Continued school-wide recycling collaboration

Carbon Offset:

- Maintained shoreline planting of native plants

Community Supporters: Stevens County Soil and Water Collaborative, Department of Natural Resources, Stevens County Environmental Services Department, Ottertail Power, University of Minnesota—Morris, City of Morris, Developmental Achievement Center, Engebretson’s Disposal Service, Info-Link



YES! students discuss green job opportunities at Marshall career expo.

New London-Spicer Middle School

3rd Prize Award - PWELC

Renewable Generation:

- Worked with local contractors and community theater organization to implement installation of solar thermal panels
- Received Clean Energy Resource Team (CERT) grant and significant community support to complete the installation

Energy Awareness & Education:

- Hosted community Earth Day Energy Rally at Little Theatre to showcase the solar thermal installation and serve a local foods meal
- Presented information about solar thermal project to multiple community groups
- Received certificate of recognition from mayor
- Led environmental and energy education activities at elementary school for two days

New London-Spicer Continued:

Waste Reduction:

- Researched and promoted worm-bin composting to reduce household organic waste
- Local Foods:
- Consulted with local Master Gardener to select edible plants, including a grape arbor, that will be planted on school grounds
- Coordinated with industrial technology instructors and students to build grape arbor

Community Supporters:

Kandiyohi County Master Gardeners, Three Seasons & More, City of New London, Kevin Welsh, contractor, CERTs, New London Township, New London Dam Club, New London Lions Club

New Ulm Public High School

Energy Conservation:

- Worked with local utilities to initiate program through local library system that will allow residents to “check out” 4 whole-house energy monitors and 24 appliance-specific watt-meters to measure electricity consumption
- Distributed CFL bulbs to community members
- Petitioned beverage companies for energy efficient vending machines

Energy Awareness & Education:

- Organized and conducted an all-school assembly for the high school (in partnership with Putting Green team) with invited presenter about energy awareness and global climate change
- Hosted local library event (in partnership with Putting Green team) to promote home energy monitoring and energy conservation

Waste Reduction:

- Expanded and improved school recycling program

Community Supporters: New Ulm Public Utilities, Brown County REA, Biohaus, New Ulm Public Library, Paul's Electric, Rolloff's Electric



Windom YES! team display information on their projects to the public.

The New Ulm Putting Green

2nd Prize & Economic Potential Awards - PEBC

Local Foods:

- Created model for Eco Cool Café, an environmentally friendly school lunchroom – to include foods grown locally at Growing Green Farm

Energy Conservation:

- Purchased energy-saving equipment for vending machines & kitchen equipment



New Ulm Putting Green Continued:

Energy Awareness & Education:

- Organized and conducted an all-school assembly for the high school student body and presented information about Eco-Cool Café
- Hosted local library event (in partnership with Putting Green team) and presented energy issues related to food production/consumption and the benefits of composting
- Presented benefits of composting, sustainable agriculture, and local foods to 100 students and parents at a Sunday school

Waste Reduction:

- Performed waste audit by tracking high school and calculating school's weekly waste
- Researched composting options appropriate for their school
- Outlined sustainable waste stream model to implement in their school: compost school waste; utilize compost at Growing Green farm; grow food at Growing Green farm and return to New Ulm community through CSA and "Farm-to-School"

Community Supporters: Dodge County Environmental Services, Brown County Recycling, Brown County Environmental Services, Biohaus, MRCI WorkSource, Retlaff's Hardware, River Creek Nursery

Ortonville High School

Energy Conservation:

- Installed vending misers for an estimated savings of \$850 per year
- Researched software to centrally shut down computers, for a projected savings of \$537 annually once implemented

Energy Awareness & Education:

- Educated the school population through regular announcements regarding energy conservation
- Posted "Thank you for turning off the lights" reminders near doors
- Completed radio interviews, newspaper articles, and an exhibit at local Sports and Leisure Show

Waste Reduction:

- Added recycling containers and promoted recycling among staff, students, and event-goers
- Increased in-school recycling by a factor of 6, from 3 totes to 19 totes per week, and reduced school waste output by 50%

Community Supporters: Missouri River Electric and 2 additional businesses



New London-Spicer YES! students and coach assemble solar thermal panel for a community building.

Redwood Falls Area High School

Energy Awareness & Education:

- Designed pedal powered generator and light board to promote the use of energy efficient light bulbs at local hardware store
- Taught 4H curriculum on “Power of the Wind” to fifth and sixth graders at Middle School

Local Foods:

- Planted seedlings to transplant into community garden
- Acquired approval from school board for 1.4 acres of land for community garden
- Researched and decided to utilize the “Farm-to-School” model to bring food grown in their garden into the school

Community Supporters:

Ace Hardware, Redwood County 4H, Varidity Energy, Redwood County Chamber of Commerce Ag Committee, Minnesota Ag and Rural Leadership Program, Redwood Valley School Board



At the Career Expo, students met with energy professionals to learn about job opportunities in the energy field.

St. James High School

Energy Conservation:

- Installed appliance timers and “vending-misers” to reduce energy consumption during non-school hours.

Energy Awareness & Education:

- Developed and shared awareness campaigns, which included the benefits and proper disposal of CFL light bulbs

Springfield High School

Grand Prize & Outstanding Teamwork Awards - PEBC

Energy Conservation:

- Studied appropriate location for solar-lit pathway, or “Solar Trail” in city park. Raised funds for solar lights and installation
- Completed research and feasibility study on area’s first ‘green roof’
- Purchased efficient motion detector lights for school’s locker rooms

Energy Awareness & Education:

- Developed Energy Monitoring Program (EMP) and announced to sixth grade classrooms, training students who were specifically interested in the program
- Weekly awareness article in the local newspaper
- Presented projects and distributed shopping bags at Springfield Home and Garden Show
- Planned YES week activities for high school in collaboration with student council and Spring clean-up day



Springfield Continued:

Waste Reduction:

- Set up red wriggler worm compost bins for cafeteria waste with plans to sell compost to gardeners in the community
- Conducted waste sort and compiled the results
- Acquired more recycling bins for school

Local Foods:

- Discussed options with School Lunch Supervisor regarding local lunches

Community Supporters:

Brown County Congress, Clean Energy Resource Teams, MLA Architects, Aloha Landscaping, L & S Electric, Richert Bus Service, Springfield Area Foundation, Braun & Borth Recycling, Pieschel Family Foundation, Pepsi Refresh Project, City of Springfield, Springfield School Board, Springfield Rotary Club

Tracy Area High School

Energy Conservation Award - PEBC

Energy Awareness & Education:

- Developed energy awareness campaign for the community

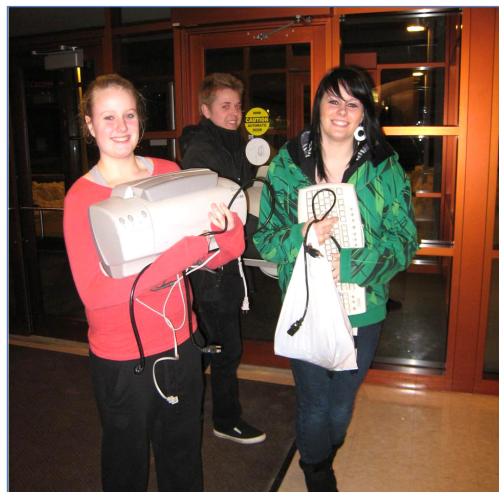
Waste Reduction:

- Established school recycling program
- Waste expense reduced due to "Recycling Pays to Sustain" program
- Expanded recycling program to a local business

Carbon Offset

- Established tree-planting initiative

Community Supporters: Waste Management, Cenex Harvest States



Westbrook-Walnut Grove High School

ACGC YES! students conduct electronic waste collection.

Energy Conservation:

- Conducted school energy audit
- Decreased temperature of school boiler by 5° F
- Reduced electricity costs by shutting off half a bank of lights and shutting off computers after use

Energy Awareness & Education:

- Informed 135 K-12 students on ways to conserve energy
- Displayed energy consumption of LED Christmas lights
- Built insulation, solar and wind modules for presentations

Community Supporters: 3 businesses

Local Foods:

- Continued expanding and experimenting with major project, Willmar Community Greenhouse
- Sold shares of fresh, winter produce to community members
- Provided fresh produce through the winter to the area food shelf
- Logged over 200 volunteer hours in 5 months

Energy Conservation:

- Researched and planned for purchase of bikes and trailers for fossil-fuel-free delivery of produce

Renewable Generation:

- Experimented with various biomass feedstocks in a biomass burner provided by AquaTherm
- Installed large-scale storage bin for biomass pellets
- Heated the greenhouse through the winter with combination of solar thermal and biomass

Energy Awareness & Education:

- Experimented with soil supplements, composting, and other science projects
- Engaged 30 students directly in the Greenhouse project

Community Supporters:

Carmike Cinema, Jon Lussenhop Farm, MinnWest Technology Campus, Sunrise Agrafuels, Becker Market/Willmar Area Multicultural Market, City of Willmar, Perkins Lumber, Heglund Catering, Willmar Area Food Shelf



Willmar YES! team gathers at their Community Greenhouse.

Renewable Generation:

- Began construction of Vertical Axis Wind Turbine (VAWT)
- Investigated appropriate wind turbines for the school
- Explored solar PV option for school's greenhouse

Energy Awareness & Education:

- Developed and maintain YES! team website with information and updates for students, teachers and public
- Developed alternative energy presentation with Kid Wind kits
- Presented projects and ideas at Farm and Home show and 5th & 6th grade classrooms

Community Supporters: Jay's Electric