

# INNOVATION IN SUSTAINABILITY

State Farm® and  
SkillsUSA  
Grant Program  
2010



State Farm®



# WHAT DOES "GREEN" MEAN?

**I**n one word, it means sustainability. One definition of sustainability, according to the World Commission on Environment and Development, is the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." State Farm increased its support to SkillsUSA by establishing the Innovation in Sustainability Grant Award Program.

Through this program with SkillsUSA, State Farm Insurance committed to helping SkillsUSA chapters bring sustainability projects to life. The purpose of the grant program is to stimulate students' awareness and interest in their environment to build understanding and skills and provide students a voice to make a significant impact in their communities.

Nearly 100 SkillsUSA local chapters applied for a State Farm grant of up to \$10,000 to fund a green or sustainable program or project that uses innovation to ensure today's needs are met without compromising future generations.

SkillsUSA evaluated the applications, then sent finalist's forms to State Farm for review before rewarding the grants. One grant per State Farm zone was awarded. Twelve schools received a \$10,000 grant in January for their projects.

The grants designated \$7,500 for project expenses and \$2,500 in travel expenses to send one advisor and two

students to the SkillsUSA National Leadership and Skills Conference in Kansas City to be a part of the first-ever State Farm Innovations in Sustainability Showcase. Chapters presented their projects to a panel of State Farm judges during the conference as part of the showcase.

Based on the presentations, the judges selected three chapters to receive additional funds. The first-place chapter, Appleton (Wis.) East High School, received a \$3,000 school award; the second-place chapter, Lufkin (Texas) High School, received a \$2,000 school award; and the third-place chapter, Hunterdon (N.J.) County Polytec, received a \$1,000 school award.

This grant program made a lasting impact on hundreds of instructors and students at career and technical schools and their communities nationwide. Training labs were enhanced, physical campuses were improved, and communities benefited from the sustainability projects. Students involved in these projects developed a knowledge and awareness of what sustainability is all about and how important it is to saving our environment.

**PROJECT:** Students built a high-mileage, biodiesel-electric hybrid vehicle, similar to a locomotive drive system. Students used a 2-cylinder diesel engine to power a generator to maintain the battery charge to power an electric motor, which drives the car. The vehicle runs on biodiesel fuel processed by students and teachers at the school.

This project involved multiple disciplines. The technology center designed the boxes to store the batteries, along with a lift system for the bed of the truck to lift the generator off of the batteries for future servicing. The photography classes documented the project progress, and the art classes drew different paint ideas. The English department put a story about the project in the school's newspaper, along with creating brochures using the article. The chemistry department became very involved in the project. Using already published research, along with a little innovation, they developed a process that made bio-diesel fuel from used vegetable oil. The project also involved the welding and fabrication classes and the auto mechanics class, who did much of the vehicle assembly.

**IMPACT:** All of these different activities had a great impact on all of the people involved. Through this project, they created a system of making bio-diesel

fuel, which they plan to continue to make and then sell the fuel to the school district to help fund the continuation of the project. The project created a school environment where students are now more aware of the new technologies that can be used in transportation. This vehicle also helped students understand more about the challenges in designing a vehicle and putting it together. Overall, up to 250 individuals (students, teachers, volunteers) were involved in various aspects of the project.

**HEARTLAND ZONE**

Appleton East High School  
Appleton, Wis.

**STATE FARM INVOLVEMENT:** State Farm agent Dave Mader participated in a check presentation on Feb. 19, 2010. He enjoyed the opportunity to see the effort of students and teachers: "To see firsthand the step-by-step process of hard work and commitment that each person displayed is truly an extraordinary achievement and well deserved."

BIODIESEL-ELECTRIC  
HYBRID VEHICLE

*"This is what education is supposed to be. We need to work together to help our students succeed. I'm involving as many different curricula as possible. Teaching today is about real-life applications."*

PETER WORLEY, SKILLSUSA ADVISOR



## CENTRAL ZONE

### Current River Career Center Doniphan, Mo.

community based on expanding an outdated recycling program. Up until this project, the only available recycling was one weekend a month using a 17-year-old recycling trailer in need of repair and replacement. Wanting to expand the recycling program and give it more significance, students built two enclosed recycling trailers for community use. New trailers are now available round-the-clock, every day for the community.

**PROJECT:** Students worked to create a partnership between the school campus and the entire

**IMPACT:** Overall, this project had an impact on everyone in the community, including future generations. The project also had a major impact on the students. The welding class, which built the trailer, usually only works on small repair projects for people in the community. This time, the class got to build something from the bottom up.

The community now has a place to bring recycling at any time. Before, it was difficult for people to schedule bringing their recyclables to town. Having a trailer in place and available daily makes it easier, and the students hope more businesses and families will recycle even more.

Up to 100 students and volunteers had a hand in this project; however, the community impact is much greater and long lasting.

*"It's not just our little truck that we got from a grant and that we thought would be a cool idea. It's so much more. We started from scratch. We embraced it and made it into something."*

KATIE VANDEN BOOMEN, STUDENT

**STATE FARM INVOLVEMENT:** Check presentation: April 2, 2010.

## EXPANDING AN OUTDATED RECYCLING PROGRAM



**PROJECT:** Using the latest technologies in a new collision repair lab, students made their program the first “green” educational setting in the central Ohio area by introducing and using water-borne paint products to reduce pollutants. The grant allowed the purchase of more environmentally safe paints, equipment and training.

**IMPACT:** The impact on student safety, the environment and the community as a whole is immeasurable. Because of the grant, the school is providing a safer work environment for the students, producing less waste and releasing fewer emissions into the air from paint spraying operations. The project provided students with the technology, tools and knowledge that will make them successful technicians. This experience was a positive one for the program.

Through student training, open-house events and equipment demonstrations, approximately 200 or more students, teachers and community members were affected.

**STATE FARM INVOLVEMENT:** Bill Seveck and Kenny Hall, who both work in the auto claims division of State Farm, were impressed by the Cromax paint system. Kenny Hall and Bill Seveck are on the Fort Hayes Advisory Committee for collision repair technology. While neither was involved in depth in this project (due to the quick turnaround with the grant parameters and their involvement in other activities), both offered their advice for the project. They also participated in a check presentation on Feb. 25, 2010.

**MID-AMERICA ZONE**

**Fort Hayes Career Center  
Columbus, Ohio**

*“I am glad we had the opportunity to work with SkillsUSA, State Farm and the Sustainability Grant project. Our school and teachers hope to offer the best education possible, and this grant allowed our students to use cutting-edge technology within their chosen field. This is the type of involvement is necessary to prepare students for a career and I want to say thanks for your assistance.”*

STEVE KALLIANTAS, PRINCIPAL



“GREEN”  
EDUCATIONAL  
SETTING



## CALIFORNIA ZONE

### Edward C. Merlo Institute of Environmental Technology Stockton, Calif.

**PROJECT:** Students turned an old vegetable garden into a sustainable living laboratory for the science and environmental technology

courses. They incorporated a system to compost appropriate waste products from the school, such as shredded paper and cafeteria waste, and used the compost to improve the structure and fertility of the soil. The redesigned garden also features a solar powered water feature. This small pond provided students in the biology class with a water-based ecosystem for analysis and study. Additionally, the garden provided the science class with soil, compost and plant based organisms for study.

*“It was a good experience working in it; I think it came out better than I expected. To be honest, I never thought I would spend so much time in it. But, it was worth my time; it wasn’t wasted time — instead it was time well spent.”*

VICTOR F., STUDENT

The garden was not accessible to mobility challenged persons. In redesigning the garden, wide walkways were created using recycled materials increasing its accessibility while building on the sustainable theme of the garden.

**IMPACT:** The entire school population is benefitting from the remodeled garden. It is now an attractive area of the school. Students are excited about the fact that they conceived, designed and implemented the garden. By providing students with an innovative sustainable garden as a learning environment, students are much more engaged in their school work. By maintaining the garden, the SkillsUSA members have a greater ownership in their campus. Instead of working with books and paper, students had and still have an experiential learning environment.

In addition to the 15 SkillsUSA members, more than 250 students and teachers will continue to benefit from the garden.

**STATE FARM INVOLVEMENT:** Check presentation: May 7, 2010. During the key events hosted by the school, State Farm representatives engaged students in conversations, saying “their presence was very valuable.”

## SUSTAINABLE LIVING LABORATORY



**PROJECT:** Every year, the carpentry and electrical construction students build a house. This grant allowed for a new alternative to that project that now benefits the school and students for a lifetime. Students designed, built and engineered a sustainable “green” classroom. This classroom uses a variety of environmentally green products, such as 15 220-watt monocrystalline silicon photovoltaic solar panels, solar sun tubes, eco-friendly green construction, energy-saving windows and geothermal wells/plumbing for heating and cooling.

**IMPACT:** Participating in hands-on projects such as the green classroom improved student knowledge of the issues and the answers to the energy and environmental problems. It created a greater awareness that will last a lifetime. It also gave students the opportunity to design, install and test the components that may provide the solutions to our energy issues.

For the community, this building is more than a classroom. It is part of the larger plan to make their school a community resource for alternative energy technology and green building techniques. Citizens will be able to see these technologies and techniques at work, then evaluate their application to

their own homes. Students can offer informational tours for residents and professionals. This future experience will enhance the student’s communication skills, give the students additional opportunities to network with the community, and help build the students self-confidence.

Overall, more than 50 students, teachers and community volunteers participated in project that will continue to grow and pave the way for more “green” projects and programs.

**STATE FARM INVOLVEMENT:** Check presentation: March 17, 2010.

**MID-ATLANTIC ZONE**

Washington County  
 Technical High School  
 Hagerstown, Md.

SUSTAINABLE  
 “GREEN” CLASSROOM

*“Our students have taken on a much greater sense of ownership in the campus; they are very proud of the work they have accomplished. Several students working on the project have shown a work ethic and sense of responsibility that we teachers have not seen from them before.”*

MARK HALL, SkillsUSA ADVISOR



## GREAT LAKES ZONE

### Heartland Career Center Wabash, Indiana

**PROJECT:** Students converted a gasoline-powered vehicle to a totally electric-powered vehicle.

This conversion was a hands-on process to educate students about electric vehicles, electric vehicle technology and the issues associated with transportation fuels. The car will be used for travel between the contributing schools of Heartland by the administration. It will be driven to run errands and displayed as an advertisement for the school.

**IMPACT:** Students learned specific skills in welding, auto body modification and auto systems modification in addition to business principles, Website development and presentation skills. The

project will open more doors to do other projects similar to the electric car. In addition, this project can help advance students to better careers and enable them to take the skills they learned from this experience on to bigger and better things in life.

Up to 250 students, faculty or community representatives were involved or participated in key events for the project. In addition, the school will continue to use the car.

**STATE FARM INVOLVEMENT:** Check presentation: March 11, 2010. Jeremy Bryan, State Farm representative, said, "State Farm is very proud to support SkillsUSA. This new grant program gives students the opportunity to work as a team to make decisions through problem-solving activities, explore and demonstrate leadership skills, and to simply be part of something bigger than anything they thought possible."



*"The purpose of the electric car project was to demonstrate to the community that Heartland Career Center (HCC) can do something bigger than most imagine. Heartland is not known for big projects like the one we have taken on. Showing the community that we are capable of something this big gives everyone involved a sense of accomplishment. Not many people can say 20 years down the road that they were the first ones to build an electric car at Heartland Career Center."*

DOUGLAS SHANNON, ROBOTICS, COMPUTERS,  
AND ELECTRONICS TEACHER



## TOTALLY ELECTRIC- POWERED VEHICLE

**PROJECT:** Students purchased a 2-kilowatt photovoltaic system for an outdoor instructional laboratory to teach students about “green” jobs. As students constructed and installed the system, they learned their technical skills in a real-world application. Students also learned theory, testing and troubleshooting and the concept of green job career training.

**IMPACT:** The school now has an actual working solar panel system. The impact of this on the school is far reaching. The system is being used to save power and energy by feeding power into the computer resource center. And, because the system can be taken apart and rebuilt, it is an ongoing teaching lab for future students.

**STATE FARM INVOLVEMENT:** Pinellas Technical Education Center kicked off the project with a check presentation that included State Farm representative Julie Smith from Winter Haven. Many others were present, including the mayor of St. Petersburg.

**FLORIDA ZONE**

Pinellas Technical Center  
*St. Petersburg, Fla.*

GREEN JOB  
 CAREER TRAINING

*“During the installation of the photovoltaic system, I had practice in several areas of the electrical trade. Overall, it was an interesting and highly educational experience.”*

JUAN C. PEREZ, ELECTRICITY PROGRAM STUDENT



**PROJECT:** Students will provide their high school with an alternative source of energy to power the high school technology. The first phase of this project will be a 26-kilowatt photovoltaic array, which will provide the electricity for the technology center's computers and lighting. Tours will be held at the school, and a website will be set up to teach communities and other schools about the implication of alternative energy. \*

**STATE FARM INVOLVEMENT:** "State Farm is very proud to support SkillsUSA," said local agent Todd Bosen. "This new grant program gives students the opportunity to work as a team to make decisions through problem solving activities, explore and demonstrate leadership skills and simply be a part of something bigger than anything they thought possible."

\*Due to circumstances at the local level involving faculty changes, the project was not completed and the grant returned.

## GREAT WESTERN ZONE

Round Valley High School  
Eagar, Ariz.

# ALTERNATIVE SOURCE OF ENERGY

WMI Central - White Mtn. Independent Home - 03/05/2010 - Round Valley High School receives \$10,000 State Farm Innovation in Sustainability Grant



03/05/2010

## Round Valley High School receives \$10,000 State Farm Innovation in Sustainability Grant

**EAGAR - State Farm, in partnership with SkillsUSA, has awarded Round Valley High School \$10,000 for its Round Valley SkillsUSA Powers Education project.**

The project involves providing an alternative source of energy for the computers and lighting in the school's technology center. This will not only allow the students to provide financial assistance to their school through an expected \$7,000 savings in energy costs each year, but will also give them an opportunity to participate in the program through hands-on study of the use of solar power and its benefits. Tours of the technology center will be offered upon completion of the project and a Web site will be utilized to teach communities and other schools about the benefits of alternative energy.

This project is one of 12 chosen nationally to compete in the National Leadership and Skills Conference in Kansas City, Mo., June 20-25.

The purpose of the State Farm Innovation in Sustainability Grant Award is to stimulate student awareness and interest in their environment and provide them with a voice to make a significant impact in their community.

SkillsUSA, a national nonprofit devoted to ensuring America has a skilled work force, is committed to developing its members into successful leaders in their communities. This goes hand-in-hand with State Farm's commitment to empowering youth and giving all children access to a quality education.

Sustainability service projects create a connection between classroom instruction and hands-on experiences, representing real-life situations.

"State Farm is very proud to support SkillsUSA," said local Agent Todd Bosen. "This new grant program gives students the opportunity to work as a team to make decisions through problem-solving activities, explore and demonstrate leadership skills and simply be a part of something bigger than anything they thought possible."

Visit [www.skillsusa.org](http://www.skillsusa.org) to see all the winning schools.

**PROJECT:** The overall goal was to educate as many people as possible on ways to conserve energy and to reduce overall energy consumption. Using the Energy Efficiency and Renewable Energy Educational Lab, manufactured by Graymark International Inc., high school students enrolled in the electrical trades program learned about hydrogen, wind and solar energies. The students gained information about energy efficiency using a professional energy tool kit that included a flicker checker, building stethoscope, infrared thermometer, light meter, temperature and relative humidity meter, and wattmeter. Students measured the various temperatures, electrical output and lighting, then determined ways to reduce energy costs. Through these hands-on interactive exercises, students gained an understanding of types, sources and forms of energy, energy conservation and recycling.

Students then presented their information to elementary- and middle-school classes in their school district.

**IMPACT:** In total, more than 400 students participated in the presentations given by the SkillsUSA members and were able to use the tools to gain an idea of ways to conserve energy. Students were also informed that the best method to create a healthier and cleaner environment is to reduce our dependence on fossil fuels. The most effective tools or practice is to conserve energy, and students were informed on what they can do to improve our country's energy consumption. This will

**NORTHEAST ZONE**

**Hunterdon County Polytech  
Career Academy  
Flemington, N.J.**

have long-lasting impact on the students for years to come. One major concept many students learned is how much energy costs and the need to conserve energy for their futures.

A partnership between the career and technical school and the local school districts is now being formed. The electrical trades students plan to expand the project by presenting to other local schools within the county.

**STATE FARM INVOLVEMENT:** On March 2, 2010, a media day was held to showcase the grant to the public in the school's Careers Café Restaurant. John J. Baldino was instrumental in the planning and preparation of this kickoff event, and he invited state and local politicians. Through his support, the school was able to make the event successful and demonstrate the significance of earning this award.

CONSERVE ENERGY  
AND REDUCE  
OVERALL ENERGY  
CONSUMPTION

*"I have benefited a lot from the green energy project. It was rewarding for me to be able to see some of the effects our efforts had. I enjoyed teaching the students because it felt like I was making a difference in the community for now and for the future. Being a part of the green energy project was a great privilege.*

DANNY TUTKO, ELECTRICAL TRADES STUDENT

*"Hunterdon County Polytech was an excellent and impressive community partner. I could see that their sustainability project was top-notch, and I was even more impressed to see the personal interest they took in making the project the best it could be."*

JOHN J. BALDINO,  
STATE FARM REPRESENTATIVE.

## PACIFIC NORTHWEST ZONE

### Bothell High School Bothell, Wash.

**PROJECT:** Students reduced the greenhouse gas emissions emitted from vehicles waiting in lines at the school district's elementary- and middle-school student dropoff zones. By collecting necessary data, then working with the Washington State Department of Ecology, they tabulated the data and extrapolated the amount of harmful emissions produced by those vehicles.

Students then worked with their local school superintendent and local school board to install anti-idling signs. They also conducted a public awareness and education campaign about what idling does to our environment.

**IMPACT:** In addition to the 36 SkillsUSA members involved, this project affected hundreds of people at school and in the community, as well as having an impact on the environment. First and foremost, this project improved the health of the community. The children in the schools and the community will have better air to breathe, and it will improve their health without all of the emissions from the cars. Also, the community and the environment will benefit from this because it will help reduce the amount of global warming and green house gases.

**STATE FARM INVOLVEMENT:** Doug Hamilton and Cheryl Granger both participated the check presentation. Cheryl also attended the community awareness kickoff at Northshore Junior High School.

# REDUCE GREENHOUSE GAS EMISSIONS

*"We commend your efforts in organizing a successful Anti-Idling Awareness Campaign in your community. We recognize the collective efforts of your entire team were key to installing anti-idling signs in student dropoff zones, and based on your research and community collaborations, implementing a public awareness campaign focused on reducing the greenhouse gas emissions in your school district."*

DANIEL LOSK, STATE FARM REPRESENTATIVE



**PROJECT:** Students conducted “green renovations” for the school’s older buildings to make the school more energy efficient. The students created a plan to educate and convert the school to a healthy environment for students to learn, nurture and grow.

“The Green School Conversion: A Green Collar Experience” included five goals:

- installation of water efficient faucets
- installation of recycling bins in the cafeteria and around the school
- installation of composting bins
- installation of rainwater tanks
- painting of an older building with environment-friendly paint

All of these projects were undertaken with the vision to reduce the waste and the carbon footprint of the school.

**IMPACT:** This project increased the awareness and importance of the benefits of sustainable environmental design. It create exposure and interest in “green careers” by the students.

This project benefits the school and, most of all, the students. Now the school has ways to reduce waste and the cost of disposing of it.

The benefits of this project will hopefully reach out from the school and influence the community to research ways of their own to “green” their homes.

The community and entire school population are well aware of the school’s achievement. In addition, 75 to 100 teachers and students expressed interest in being involved in the project.

**STATE FARM INVOLVEMENT:** There were four state farm representatives involved, including Joe DeBose and Brandon Smith.

**SOUTHERN ZONE**

R.L. Osborne High School  
Marietta, Ga.

GREEN SCHOOL  
CONVERSION



*“Since Osborne is a low economic class school, most people think that a project like this one would be unattainable for us. However, we have shown our student body, and our community that doubted us, that if we just work together on these projects, then goals like these are within our grasp. We can work toward being a school that is not only green and environment friendly, but sustainable.”*

TARSHA WYNN, SkillsUSA ADVISOR

## TEXAS ZONE

### Lufkin High School Lufkin, Texas

**PROJECT:** Students designed and built a "green energy" efficient home that they donated to Habitat for Humanity for a local family. Energy efficiency is paramount and will be used in the design and construction.

The project used the skills of students in drafting, building trades, and journalism and newspaper.

**IMPACT:** Not only did Lufkin students unite to give back to the community, they made a significant difference in the life of a local family. Students now have a renewed interest and desire to serve their community and gained experience on how their skills can be used in real-life situations and to

benefit others. Throughout the project, more than 300 students, volunteers, community leaders were involved. The projects impact on the community and students leaves a lasting impression.

**STATE FARM INVOLVEMENT:** State Farm agents and their families participated in a check presentation on March 6, 2010, and in a workday on the house.

Local State Farm agents Chad Morgan, Jay Jackson, Donna Walker and agents from surrounding areas are very much appreciated for their dedication and support of the project.

# "GREEN ENERGY" EFFICIENT HOME

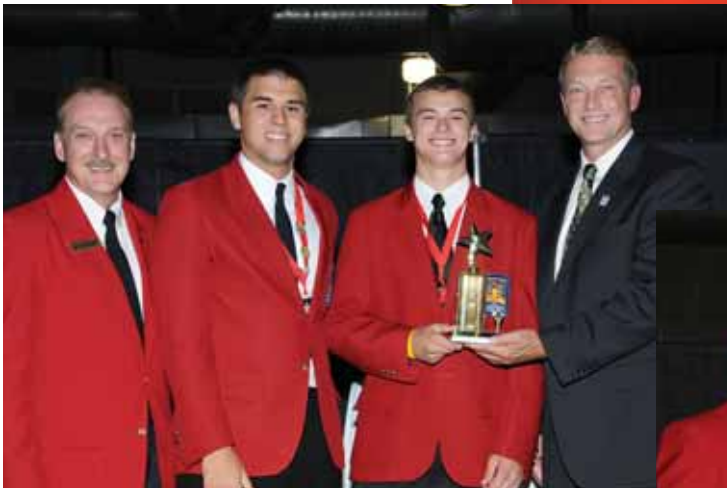
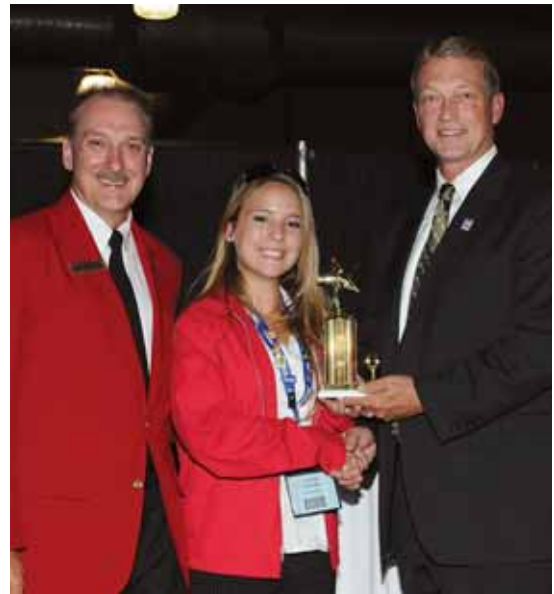
*"The impact of this project for our school and community goes well beyond building a home. Our students have learned valuable life lessons that will benefit them throughout their lives, and the community members have also learned a little something about today's youth."*

SHELLY SLATON, ASSISTANT PRINCIPAL  
CURRICULUM/TESTING, LUFKIN HIGH SCHOOL



**STATE FARM**

Innovation in Sustainability Showcase



The State Farm Innovation in Sustainability Showcase was held at the SkillsUSA National Leadership and Skills Conference in Kansas City, Mo., June 22-25, 2010. Each of the grant winning schools sent two students and one advisor to the conference to showcase their project and have the opportunity to win additional grant money.



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