



# **KY Tech Celebrates its own First of a Kind Renewable Energy Project “Wind Turbine Generator”**

## **Ribbon Cutting Ceremony Hosted by Russell ATC Staff and Students**



**Photo above: Ribbon Cutting Ceremony participants enjoy the moment. From left to right: Russell ATC E-3 Team members Jon Napier, Kenny Prater, Krista Miller, and Amber Russell; Russell ATC Principal Keith Parsons, Russell High School Honors Physics Teacher Joe Aldrich, OCTE Deputy Executive Director Lewis Carter, KY NEED (National Energy Education Development) Coordinator Karen Reagor, Dept. for Workforce Investment Commissioner Beth Smith, Ashland Community and Technical College President Dr. Greg Adkins, Representative Rocky Adkins, Education Cabinet Secretary Laura Emberton Owens, Environmental and Public Protection Cabinet Secretary Teresa J. Hill, Russell ATC Electrical Technology Instructor Doug Keaton, Russell Independent Schools Superintendent Dr. Susan Compton, Montgomery Co. ATC Principal Mike Kindred, Senator Charlie Borders, KY Tech Prep State Director Dr. Ahmed Sabie, Representative Tanya Pullin; and E-3 Team members Shaun Stephens, Heather Kinley, and Mike Smith. Not pictured: E-3 Team member Josh Smith.**

It was a first in the history of KY Tech and a great day for all of education. At the center of attention, during a ribbon cutting ceremony to commemorate the building of a 60' tower topped with a 1 Kw wind turbine generator, were Russell ATC Electrical Technology Instructor Doug Keaton and his E-3 (efficient electrical energy) Team of students; and Joe Aldridge, Russell High School Honors physics instructor and his students. Not only was the building of this wind turbine generator a first in the KY Tech school system, but two very special ladies lauded the efforts of the teachers and students by participating in the May 23 celebration.

Education Cabinet Secretary Laura Emberton Owens and Environmental and Public Protection Cabinet Secretary Teresa J. Hill were both on hand to take part in the ceremony – from an educational as well as an environmental standpoint - also a first in the KY Tech School System.



Ceremony was held outside in the ATC's parking lot adjacent to the front lawn.



Registration Table (l to r): Amber Russell, Heather Kinley and Krista Miller.



Dept. for Workforce Investment Commissioner Beth Smith (l) and KY Tech Prep Dir. Dr. Ahmed Sabie (far right) greet Secretary Hill and Secretary Owens upon their arrival to the event.



But, how did all of this come about? Keaton began looking at the subject of renewable energy technology as a result of becoming involved in a KY Tech Prep project with Russell High School Physics Instructor Joe Aldrich. The initial project was to study alternative and/or renewable energy solutions with a focus on wind energy. Funds from the Tech Prep grant were used to purchase items to build a 1 Kw wind turbine generator and an energy conservation display. Because of the project's relevance, additional funding was provided through business and industry support.

Before the wind turbine was erected on the lawn of the ATC, Keaton's students began studying the history of energy as a beginning step into several energy related projects. And, it wasn't long until his students were building mini windmills. This created a lot of excitement among his students and generated attention within the school district. Aldrich also had his students learning about and erecting windmills in his physics class.

Because of Keaton's 'out of the box' thinking and his ability to connect content to real life applications, his students became part of a KY NEED project that focused on environmental awareness. They built a display with two residential metering devices to compare the energy usage of incandescent and compact fluorescent bulbs. Keaton's E-3 Team took part in ENERGYSTAR's Change a Light, Change the World Campaign and set up at Wal-Mart to showcase energy. Keaton's students solicited 685 people to sign the 'Energy Star Pledge.' This prompted KY NEED Coordinator Karen Reagor to nominate the E-3 Team for an Environmental Quality Commission Earth Day Award. The team was one of eight to be recognized in the Commonwealth.



Photo at right:  
hand prints of  
the E-3  
students at the  
base of the  
wind turbine.

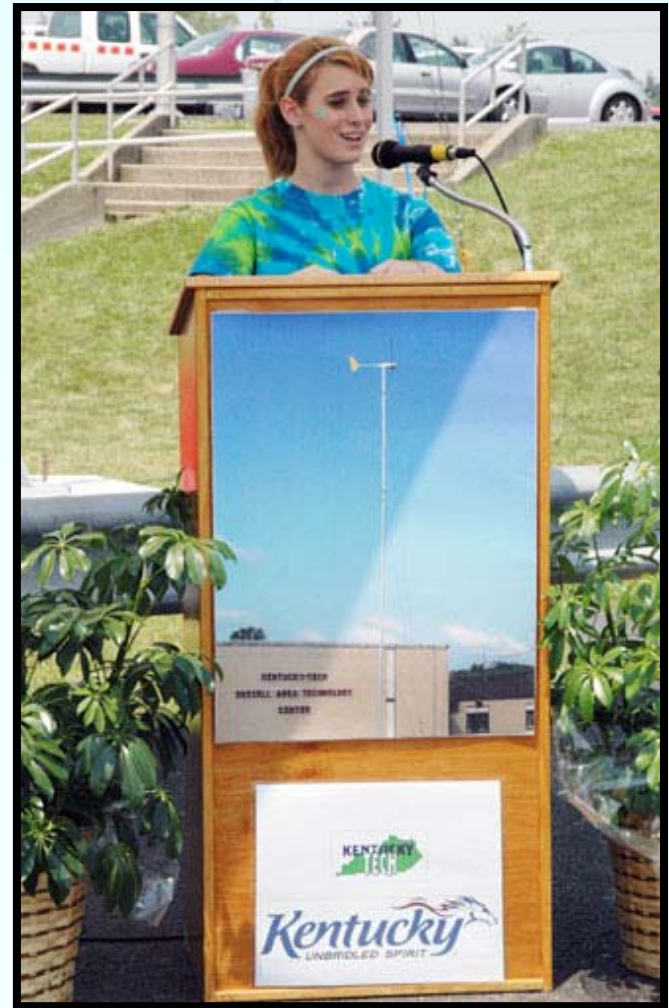


Photo at left: Russell ATC CAD Instructor Stephanie Wheeler, Russell High School Physics Instructor Joe Aldrich, and Electrical Technology Instructor Doug Keaton.

Reagor also introduced Keaton to NEED's Science of Energy curriculum. Created by teachers, the curriculum incorporates science into all of its activities and also provides students with an opportunity to become facilitators to teach others. So, he and his students took part in some training and incorporated the material into their project. Keaton then contacted Russell Middle School and developed a two day science fair for middle school students. His students were a major part of the process and helped younger students better understand the "Science of Energy." It was such a hit that a full week is planned for next year.

Along the way, Keaton's students were also awarded the Kentucky NEED senior level award for Energy Achievement and are planning to travel to Washington, DC to accept the National NEED Rookie of the Year Senior Level Youth Award.

It's no secret that energy costs are second only to personnel costs in school districts nationwide. So, Keaton, Aldrich and their students decided to install the wind turbine generator, that they have built as part of their KY Tech Prep energy conservation plan and want to lower costs by 25 per cent at the Russell ATC over this next year. Thus, the ribbon cutting ceremony served as an awesome reminder of a journey that Keaton's students embarked upon at the beginning of the school year – building a wind turbine generator.



Speaking on behalf of the E-3 Team, Heather Kinley (a senior) said, "Mr. Keaton is an outside of the box teacher - and - that's what we all love about him."

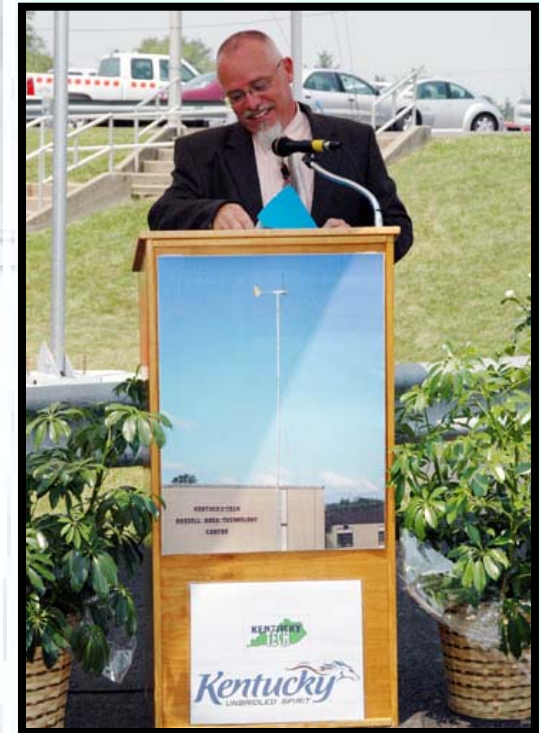
This whole ceremony was unbelievable, in fact even surreal – but it was a great day for education because this was a KY Tech Prep project where technical education and skills training, and academic concepts were taught to students in a real world application.

We were humbled and honored by the whole experience. To be able to share this phase of the project with my students, family, friends, notable guests, industry representatives, as well as with the public is incredible.

It's about who we are and what we are doing here at the Russell ATC to provide students with an outstanding technical education. And, KY Tech Prep is a great avenue for collaborative efforts between technical education and academic instructors. We appreciate the efforts of State Tech Prep Director Dr. Ahmed Sabie and his able assistant Charlene Baxter for the funding of this project. We further appreciate the efforts of all of our industry partners for stepping up to the plate to provide special assistance in this endeavor. We have created an excellent and timely environmental project – but we have made an impact on our students – the stewards of our environment for the next generation. Someone asked me what is next. My reply was that we have to continue what we started because this journey is the destination. We have to not only accept responsibility for energy and its consumption, but to do something about it because the future is now.

***Russell ATC Electrical Technology Instructor Doug Keaton***

**Doug Keaton**  
Electrical Technology Instructor  
Russell ATC



**Doug Keaton served as the Master of Ceremony for the ribbon cutting event.**





**Laura Emberton Owens**  
Kentucky Education Cabinet Secretary

**“This collaborative project has been an outstanding series of renewable energy activities recognized at the local, state and soon to be national levels. We are pleased to have Kentucky teachers provide our students with an opportunity to be involved in and at the forefront of this global energy issue. The culmination of Mr. Keaton’s Science of Energy Project is the building of this wind turbine generator. I have heard him say that he didn't want just to talk about doing something; he wanted to actually do something. Well, his students have experienced, firsthand, the thrill of building this impressive project from the ground up,” says Education Cabinet Secretary Laura Emberton Owens. “This inventive instructor has taken a personal interest in the ethical responsibility of protecting and preserving the resources of the Commonwealth by working to increase energy knowledge, awareness and conservation among his students through this innovative KY Tech Prep project. We also appreciate Mr. Aldridge for his efforts to incorporate academic concepts into this project. It's obvious the partnership was a success.”**

**Departing from her speech, Secretary Owens looked toward the Russell ATC E-3 Team and recounted a recent meeting in Frankfort where the students were being recognized for winning the Kentucky NEED senior level award for Energy Achievement and said, “I just want to convey to Heather Kinley that I appreciate the lesson of incandescent versus compact fluorescent bulbs. As I promised, we have gone to the store and bought a compact fluorescent bulb and changed a light in our house. You taught me something that I have taken home.”**

**Photos at right:**

**Mr. Keaton takes a moment to explain to Secretary Hill how the wind turbine generator works and how they can use a computer to data log information from an anemometer. Keaton and his students are tracking data including maximum, average and current wind speed. Technology allows them to monitor the different wind speeds at intervals of their choosing - from every minute to once every 24 hours.**



**Secretary Hill originally met Keaton and his students when they were recognized with an award given by the Environmental Quality Commission during the 2007 Earth Day Awards Ceremony. It was during this event that Hill first learned about the wind turbine generator. She made Keaton promise to invite her to the ribbon cutting ceremony. True to her word, this cabinet secretary was delighted to attend and relayed the following message.**

**“We all remember one teacher who inspired us and challenged us to reach the next level -- who made us realize that we could be more, and accomplish more, than we ever dreamed. Doug Keaton is that type of teacher,” said Hill. “The impact that Doug has had on these students, and, in turn, the impact they will have on our environment and the Commonwealth, is immeasurable. Governor Fletcher and I commend all those involved and challenge you to continue to set, and reach, extraordinary goals.”**





Russell Independent Schools Superintendent Dr. Susan Compton addresses guests during ceremony.

“On behalf of the Russell Independent Bd. of Edu., along with our other collaborative school districts including Raceland and Fairview, I extend an enthusiastic greeting and sincere welcome in support of this outstanding ceremony. The KY Tech Prep project involved our students in such an exemplary and collaborative initiative by integrating technical education and skills training with our academic physics program to showcase energy. As a school superintendent, along with the two other district leaders, Bill Musick and Frank Melvin, I can say that this is a very special day for all of us. Our pledge to students, parents, and the community is a commitment of excellence in all that we do to meet the needs of all students. We all salute this exemplary Wind Turbine Project that demonstrates a focus on math, science and electrical technology - an integration taking place at the highest level.

Education works best when there is a true partnership among our state

agencies, school systems, students, families, and communities. We understand and value the rich experience and personal meaning partners bring to collaborative initiatives. We believe the connections made and the shared goals that result from such partnerships are at the root of the most powerful learning; thus allowing students to prosper. And, we know that our students from the Russell ATC are the best and are continuing our legacy of academic excellence.

We are all proud of Keith Parsons, principal of our Russell Area Technology Center; Doug Keaton, electrical technology instructor; Joe Aldrich, physics teacher; and our E-3 student team because they have collectively produced the state's best energy project and perhaps one of among the nation's finest.”

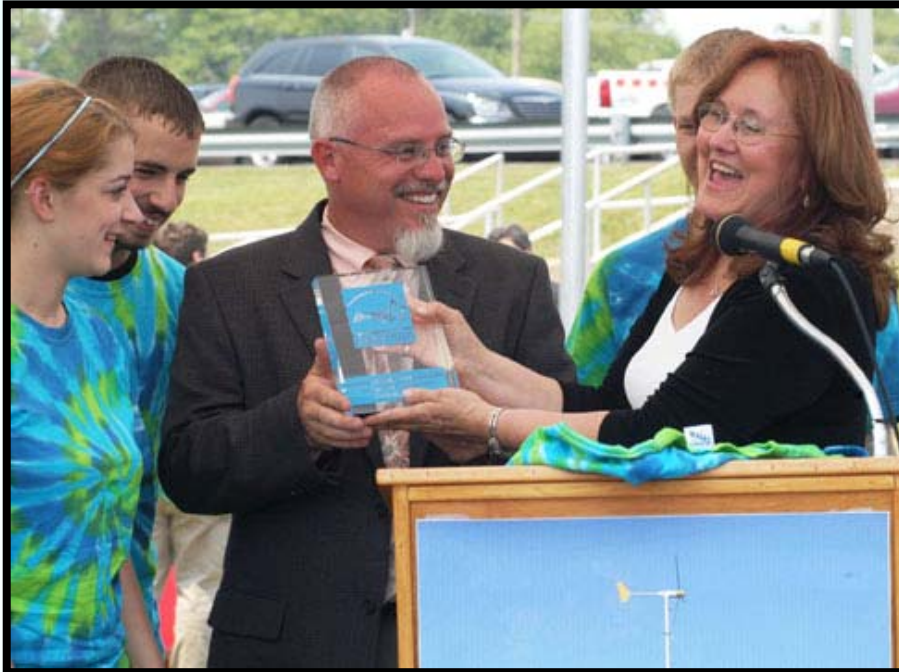
***Dr. Susan Compton, Russell Independent Schools Superintendent***



Compton, Hill and Owens



**KY NEED Coordinator Karen Reagor  
Presents Keaton and his students  
with NEED's Travel Award - The Energy Star Partner  
of the Year Award. NEED was nationally recognized  
and elected to present this as a traveling trophy.**



**KY NEED Coordinator  
Karen Reagor becomes an  
official member of the  
Russell ATC E-3 Team after  
accepting the E-3 T-Shirt  
from Doug Keaton.**

**“In March of 2007, NEED (National Energy Education Development) was recognized as an Energy Star Partner of the Year for our promotion of the Change a Light, Change the World national campaign. We realize that NEED's success is due to the outstanding efforts of our NEED students. To honor those students who played a significant role in helping us reach our goals, we have decided to have our award 'travel the U.S.' to be presented to those outstanding NEED Teams,” says Kentucky NEED Coordinator Karen Reagor. “The E-3 NEED Team at the Russell Area Technology Center is the first team to be recognized.”**



**“As principal of the Russell ATC, I’m proud of our staff and students for taking on this timely energy related project. It’s been an outstanding display of hard work, dedication and learning. This began as a KY Tech Prep project and we teamed up with Mr. Joe Aldrich, the AP Physics instructor from Russell High School. Joe and Doug exchanged ideas, students and research. The collaborative efforts spawned the final product with the building and installation of a 60’ tower topped with a 1 Kw wind turbine generator. It has become reality - one that Mr. Keaton envisioned from the day he came into my office with this idea for the Tech Prep project. And yes, we plan to use the power generated to ultimately save the school money – we hope to achieve a 25 percent savings.**

**We celebrated our Ribbon Cutting Day with Education Cabinet Secretary Laura E. Owens and Teresa J. Hill Secretary of the Environmental Cabinet**

**as our guest speakers. Senator Charlie Borders, Representatives Tanya Pullin and Rocky Adkins, ACTC President Dr. Greg Adkins and over 100 others also came to celebrate the achievements of our students with us. We profoundly appreciate their support by taking the time to be here with us.**

**I’m proud of my entire staff for pulling together to make this day happen - to Doug Keaton and Joe Aldrich for the technical and academic integration that took place throughout the school year. But, most of all, I’m proud of our students for their hard work on this new and innovative project. I’m looking forward to next year - not just for a repeat performance, but for an even bigger collaborative effort worthy of another grand celebration.”**

***Keith Parsons, Russell ATC principal***





**Photo at left (l to r):  
Senator Charlie Borders,  
Representative Tanya  
Pullin, Russell High School  
Physics Instructor Joe  
Aldrich, Education Cabinet  
Secretary Laura Emberton  
Owens, Representative  
Rocky Adkins, Russell ATC  
Electrical Technology  
Instructor Doug Keaton,  
Environmental and Public  
Protection Cabinet  
Secretary Teresa J. Hill,  
and Russell Independent  
Schools Superintendent  
Dr. Susan Compton.**



**Borders, Owens and Hill**

**Below (l to r): Representative  
Rocky Adkins and Senator  
Charlie Borders**



**Above: Representative Tanya  
Pullin and Ashland CTC  
President Dr. Greg Adkins**





Photo at left: Representative Rocky Adkins and Electrical Technology Instructor Doug Keaton take a moment to chat about renewable energy.

"This collaboration between students, academic and technology teachers, where new sources of renewable energy are being studied and actually created, is exactly the kind of out-of-the-box thinking needed to solve America's energy problems," said Majority Leader Rocky Adkins, (D-Sandy Hook). "In the last two legislative sessions, I have introduced two bills that position Kentucky as a national leader in seeking alternative energy sources - including wind, solar, and coal - to eliminate our dependence on foreign oil. The Kentucky Tech Prep project proves that innovation and collaboration are keys to energy independence and I hope other schools will be inspired by their example."

First photo at right: Education Cabinet Secretary Laura Emberton Owens, Representative Rocky Adkins and Keaton.

Second photo at right: KY Tech Area Supervisor Clifford Wells and Representative Rocky Adkins.







**Above (l to r): Russell ATC CAD Instructor Stephanie Wheeler and Representative Tanya Pullin.**

**“I am very proud of Mr Keaton and the E-3 students at Russell Area Technology Center. As the chairman of the Special Committee on Energy in the Kentucky House of Representatives, I worked hard on energy issues, particularly alternative energies. It is especially exciting to me, then, that the students at the Russell Area Technology Center chose alternative energy as their project. I also appreciate Russell High School and teacher Joe Aldrich for working with the E-3 students on this important project,” says *Representative Tanya Pullin*. “This project can show to the community the viability of alternative energy as well as power some of the lights in the school building and teach the students through hands-on learning.”**

**“Doug Keaton is one of the shining stars of the KY Tech system. His relationship with his students, his application and context for learning, his focus on problem solving and raising the bar are exactly where the successful programs of the future are headed. I can tell from the excitement and energy of his students that he is both respected and supportive,” says *OCTE Executive Director John Marks*. “As an old electricity teacher myself, I know how the curriculum can sometime be a bit dry.**

**Doug has brought new life to the classroom; engaged his students in real community service and brought them both state and national recognition. He has challenged his students both technically and academically. And, he has brought sharp focus in his program to the ‘New Three ‘R’s,’ - in their proper order - Relationship - Relevance – Rigor; which, in fact, is the only order that works!”**



**Photo (l to r): KY Tech Prep State Director Dr. Ahmed Sabie, Keaton, OCTE Executive Director John Marks and incoming OCTE Deputy Executive Director Mike Kindred.**

**“Many outstanding Tech Prep projects have evolved in our Commonwealth throughout the years as a result of dedicated teachers and administrators. This project is the epitome of a hot topic and creating a pathway for students to succeed. My congratulations to both Doug Keaton and Joe Aldrich for their skill in developing an integration project that seems to have taken this state by storm.”**

***KY Tech Prep State Director Dr. Ahmed Sabie.***



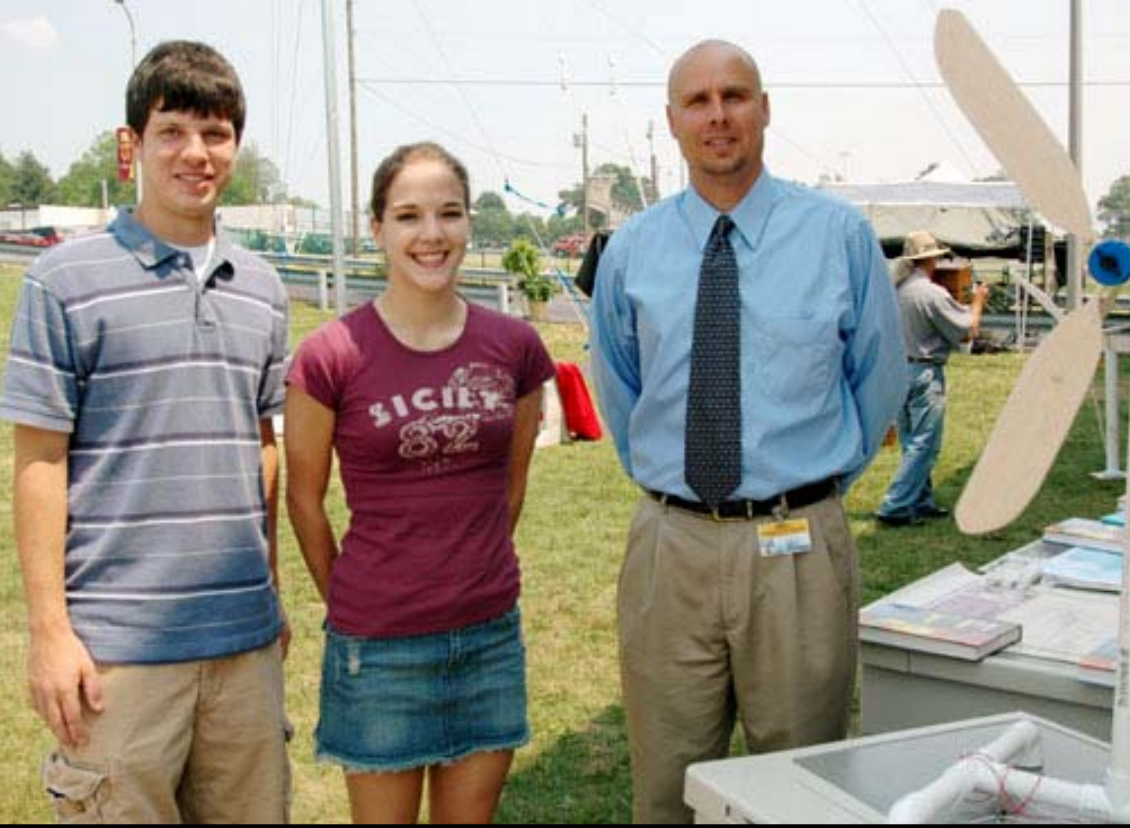


Photo at left (l to r): Honors Physics students Eric Conley and Andrea Breaux pose with their instructor Joe Aldrich.

"It was great to get outside the classroom and apply our knowledge in the real world. The windmill gives all of us a sense of accomplishment in knowing that we are saving energy. I really enjoyed working with other students." Eric Conley

"This project has been a great experience for me and really helped me apply the concepts I learned in the classroom to the real world. I strongly support the continuation of such projects in the future. The educational benefits and environmental awareness are something that I will certainly carry with me beyond high school." Andrea Breaux

"I had a wonderful time working with my students and Mr. Keaton's students on this project. I think that students will remember this more than the other things that I taught them this year. It helped to show them how important it is to be able to work with others to accomplish a common goal. Most students seem to be truly interested in the project and learned more than they would have normally about clean energy," says Russell High School Honors Physics Instructor Joe Aldrich. "My goal for this project was to get my students thinking about the future of energy and what they can do to help with this country's energy needs in the future. The project was a success. I have had better questions asked this year compared to previous years. It was awesome watching something that was born in Mr. Keaton's head and then built before our very eyes."



**Photo at left: E-3 Team members.**

**Front row, (l to r): Heather Kinley, senior; Krista Miller, junior; and Amber Russell, junior.**

**Back row, (l to r): Shaun Stephens, junior; Kenny Prater, senior; Mike Smith, senior; Jon Napier, senior; and Josh Smith, junior.**

**“I speak for all of Mr. K’s students when I say, we never knew what we were getting into when we took this class. From the beginning, Mr. K taught and coached us like a team. Then, the E-3 team emerged and we accomplished our goals,” says Krista Miller. “The end result was this huge ceremony with a lot of very important people coming to share our project with us. This was cool and made us all very proud of our work and our class.”**

**“ I have been a part of this project since Mr. K’s brainstorming session in class. To tell you the truth, this has probably been the most life changing experience I have had during my entire life to this point. Mr. Keaton is one of those wonderful life changing guys, if you let him. I know that if not for him, none of this cool stuff would have taken place. It takes a very different kind of teacher to pull this off and he is different,” says Shaun Stephens. “I started in this class, but now I have found a career path. My plan is to become an Environmental Engineer or an Electrical Engineer. I will focus on renewable and alternative energy studies. I have had to dress up more for this one guy and our activities than I do for my parents. I have met more people that will help me with my future endeavors - from political leaders, business leaders and educational leaders than anyone could imagine. And, to top it all off, I get to travel to Washington DC on a plane, (I have never flew before) with other classmates as a result of Mr. K and his leadership in our classroom. This class and all the work we have done has been life altering to say the least. It has made my life and those of my classmates better and given us the confidence to make a difference in the lives of those we care about and our community. Thanks Mr. K”**

**“This project started as a class where learning was fun and very challenging,” says Mike Smith. “It turned into being a project about the impact we have on the environment and how we can help do our part by exploring nature’s technology and combining it with modern technology. And, then it became more than just fun; but, it remained very challenging.”**





**Above (l to r): Retiring OCTE Deputy Executive Director Lewis Carter, KY Tech Area Supervisor Clifford Wells, and incoming OCTE Executive Director Mike Kindred.**



**Top left: Doug Keaton personally thanks his AEP supporters for the special attention they have given to his students.**

**Bottom left: OCTE Deputy Executive Director Lewis Carter takes a moment to speak with WESTCO representatives who have provided support to Keaton's program.**



Keaton is being interviewed by WSAZ Channel 3 reporter.

“Let me begin by saying I have been richly blessed with what I think are the best students in school. They came together when they needed to, inspired each other, took on responsibilities and jobs, and became thoroughly engrossed in a remarkable environmental project. From the onset, they challenged me to challenge them – what a rush to know they always surpassed my expectations. Any teacher would be proud of these special kids and I’m no exception.

Our Russell ATC “E-3” team, made up of 5 seniors and 5 juniors, is not your typical group of high school students. This team is made up of students who have to work

after school and endure their own social challenges. Each of these students became part of something bigger than they are, but man did they learn and perform together. It was an awesome day when they inspired over 600 middle school students with their science fair. It was also an awesome day when they impressed the public with their windmill displays, and it was extraordinary to watch them interact with all those who attended the ribbon cutting ceremony and intelligently discuss what they have gained from working on this project. But, most of all, they were awe inspiring to me. These kids have matured and focused on something more than just who they are and what they want; they have become part of a global society interested in energy conservation. They have made me a better person, friend, parent and teacher. Quite frankly, I want to thank each of them for their respective contributions in making the whole “Wind project” phase of energy conservation a complete and total success.”

**Doug Keaton,**  
**Russell ATC Electrical Technology Instructor**



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