Budget

Kenston Local (047191) - Geauga County - 2014 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (544)

U.S.A.S. Fund #:
Plus/Minus Sheet (opens new window)

Purpose Code / Object Code	Salaries 100	Retirement Fringe Benefits 200	Purchased Services 400	Supplies 500	Capital Outlay 600	Other 800	Total
Instruction	0.00	0.00	50,000.00	100,000.00	67,500.00	0.00	217,500.00
Support Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Governance/Admin	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Prof Development	27,300.00	5,700.00	70,000.00	60,000.00	0.00	0.00	163,000.00
Family/Community	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Safety	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Facilities	0.00	0.00	1,245,000.00	166,180.00	100,000.00	0.00	1,511,180.00
Transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	27,300.00	5,700.00	1,365,000.00	326,180.00	167,500.00	0.00	1,891,680.00
						Adjusted Allocation	0.00
						Remaining	-1,891,680.00

Application

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Applicants shall respond to the prompts or questions in the areas listed below in a narrative form.

A) APPLICANT INFORMATION - General Information, Experience and Capacity

1. Project Title:Renew Blue

2.Executive summary: Provide an executive summary of your project proposal and which goal(s) in question 9 you seek to achieve. Please limit your responses to no more than three sentences.

This proposal describes a unique approach to fiscal reductions as well as a powerful opportunity to authentically increase our students' literacy in energy, conservation and sustainability while using the program infrastructure to facilitate experiential learning of existing core requirements. This proposal will substantially impact the overall district budget for the five years (over two million dollars in savings) with savings continuing beyond the grant term. In addition, the activities associated with this proposal will impact the entire student population (over 3,000), as well as faculty and parent community in both culture and student achievement.

3096 3. Total Students Impacted:

4. Lead applicant primary contact: - Provide the following information:

First Name, last Name of contact for lead applicant: Robert A. Lee, Ph.D.

Organizational name of lead applicant: Kenton Local Schools

Unique Identifier (IRN/Fed Tax ID): 047191

Address of lead applicant: 17419 Snyder Road

Phone Number of lead applicant: 4405439677

Email Address of lead applicant: Bob.Lee@kenstonlocal.org

5. Secondary applicant contact: - Provide the following information, if applicable:

First Name, last Name of contact for secondary applicant: Nancy R. Santilli

Organizational name of secondary applicant: Kenston Local Schools

Unique Identifier (IRN/Fed Tax ID): 047191

Address of secondary applicant: 17419 Snyder Road

Phone number of secondary applicant: 4405433057

Email address of secondary applicant: Nancy.Santilli@kenstonlocal.org

6. List all other participating entities by name: Provide the following information for each additional participating entity, if applicable: Mention First Name, Last Name, Organizational Name, Unique Identifier (IRN/Fed Tax ID), Address, Phone Number, Email Address of Contact for All Secondary Applicants in the box below.

N/A

7. Partnership and consortia agreements and letters of support: - (Click on the link below to upload necessary documents).

* Letters of support are for districts in academic or fiscal distress only. If school or district is in academic or fiscal distress and has a commission assigned, please include a resolution from the commission in support of the project.

* If a partnership or consortium will be established, please include the signed Straight A Description of Nature of Partnership or Description of Nature of Consortium Agreement.

UploadGrantApplicationAttachment.aspx

8. Please provide a brief description of the team or individuals responsible for the implementation of this project including relevant experience in other innovative projects. You should also include descriptions and experiences of partnering entities.

Kenston has been awarded a National Green Ribbon School, a National Blue Ribbon School, with 12 years of "Excellent " ratings by the Ohio Department of Education, successfully implemented over $3,000,000 of grant driven programs over the last 5 years and received recognition for Achievement for Excellence in Financial Reporting awards from the Auditor of State. The same team that developed our Innovative grant has been involved in the development of this proposal. We have worked closely over the past two years with the Ohio Department of Education for fiscal guidance and the ONET Innovation Specialist for implementation assistance through site visits and ongoing communication. We also worked in collaboration with the Ohio Legislature, the Cleveland Foundation, The US Department of Energy, Kilowatts for Education and The Ohio Department of Energy to secure funding of $2,000,000 to support our innovative efforts in the area of sustainable energy. Further, throughout these initiatives, the district has partnered with the Kilowatts for Education consortium, sponsored by The Renaissance Group, an entity with a strong track record in bringing similar financially and programmatically viable projects to fruition. Kilowatts For Education (kW4Ed) allows real-time data and resource sharing between member sites for lesson enhancement and hard science. It has both user friendly interactive public web access and a research quality virtual server based data management and archive system where educators, students and researchers alike individually or in collaboration can access and engage with real world data streams. The approach of the system also lends itself to replication in other content areas by design, all increasing long-term viability and lowering long-term costs. The kW4Ed data systems has already demonstrated success in data and other programmatic sharing across the three charter districts (Kenston, Archbold and Pettisville), as well as the other charter members (Cuyahoga County Fairgrounds, Lake Metroparks Farmpark and Case Western Reserve University). Auburn Career Center is a Regional Vocational School serving Lake and Geauga County students and residents with existing renewable energy and sustainable building programs. Parker Hannifin is a multi-billion dollar company headquartered in Northeast Ohio with strong experience in the wind energy supply chain and commitment to the school as clearly demonstrated by their offer to donate $721,000 of the $800,000 needed to acquire the program's wind turbine. Regional First Responders (including: Bainbridge Fire Department, Heights Area Special Rescue Team, Hillcrest Technical Rescue Team) is responsible for the regions high elevation rescues for the local training of existing and future rescue personnel. They will bring expertise, equipment and program coordination directly linked to regional related career needs as they utilize the facility for this highly needed training at a local level. Cleveland State University is a Regional and State leader in education serving more than 17,000 students through eight colleges and more than 200 academic programs including curriculum and teacher development have committed to co-author our curriculum development. MC2 STEM High School is a part of Cleveland Schools and leaders in STEM education development and practice, "programming that turns scientific theory into reality". Sodexo is an international leader providing maintenance and related services including sustainability, energy conservation and efficiency initiatives implementation will provide energy audits, sustainability program implementation support and LED lighting program coordination. Science Olympiad are national leaders in science competition and networking. Kenston has a long history of success with student participation and recognition with this program. A new category of green problem-solving has been included as a pilot event in conjunction with the Kenston SD.

B) PROJECT DESCRIPTION - Overall description of project and alignment with Outcomes

9. Which of the stated Straight A Fund goals does the proposal aim to achieve? - (Check all that apply)

- [x] Student achievement
- [x] Spending reductions in the five-year fiscal forecast
- [ ] Utilization of a greater share of resources in the classroom

10. Which of the following best describes the proposed project? - (Select one:)

- [ ] New - never before implemented
- [ ] Existing and researched-based - never implemented in your district or community school but proven successful in other educational environments
- [ ] Mixed Concept - incorporates new and existing elements
- [x] Enhancing/Scale Up - elevating or expanding an effective program that is already implemented in your district, school, or consortia partnership

11. Describe the innovative project.

Leveraging our existing programs and successes, we want to benefit again from the synergy we have created between capital investment related savings and explicit curriculum to provide real world meaning to student experiences while lower operational costs. Our proposal reflects our continued leadership, vision and commitment and includes over $2,000,000 of projected savings from the following innovative initiatives: 1. Leveraging our existing wind project success and in partnership with Parker Hannifin, the donation of a 600kW turbine has been negotiated ($721,000 donation match pending award

of this grant). The Straight A funding would provide funds for the balance of the turbine and installation costs setting the stage for significant utility cost savings in the five year period and well beyond, all while providing further opportunities for our students and community through the system's integration into overall program. 2. The addition of a second renewable energy course for all seventh graders. Using a STEM approach and carefully aligned with state and national learning standards, our students will have a unique opportunity to develop critical and creative problem-solving skills as they become student leaders and experts in a growing and relevant field. In partnership with Auburn Career Center, a teacher expert on renewable energy will be assigned to teach this course at Kenston Middle School. This agreement would allow us to systematically extend the curriculum without cost to Kenston Schools and qualify for vocational education funds to sustain this program. 3. The addition of a required online course for all freshmen. The use of one-to-one student Chromebooks to support this instruction would be purchased through this proposal. The long- term savings to the District will be realized through an increase in class size (50) and a reduction in personnel of two teachers. A teacher will be available to provide support and student monitoring rather than direct instruction. This course format and equipment usage can potentially be replicated in other content areas for further personnel-related savings. 4. Other curriculum enhancements to include course of study revisions with the commitment of curriculum experts from Cleveland State and the MC2 program. Alignment with current pacing guides K-12 will ensure a cohesive vertical alignment. Upgrades on the Kilowatt for Education (kW4Ed) resource and continued professional development in the areas of STEM. KW4Ed allows real-time data and resource sharing between member sites for lesson enhancement, or hard science. Now that the concepts and functionality of the system have been proven, we will use the Straight A Funds to move the kW4Ed web-tools from beta versions to fully implemented tools ready for access and replication in any interested districts or entities. This approach allows what might impact less than 100 students at one campus to impact thousands across the State with little to no additional investment. 5. Outreach to local business and organizations in related fields will include: Working with Science Olympiad to develop their green energy component of their competitions to enhance our well-established involvement and success with our Middle School teams; The Bainbridge Fire Department, as first responders, will utilize access to the turbine for use by the Chagrin Southeast Hazard Materials team and two other partners, for much needed regional rescue and long term career readiness training on wind turbines at no cost to the District.. 6. This proposal also identifies an investment in LED lighting for Timmons and the Intermediate school creating a highly replicable model for proven savings with paybacks of less than 5 years. This will leverage our existing heightened energy awareness over the last several years while continuing to support our vision. In partnership with Sodexo, regularly scheduled energy audits (PROKARMA Co) will provide us with feedback.

12. Describe how it will meet the goal(s) selected above. - If school/district receives school improvement funds/support, include a brief explanation of how this project will advance the improvement plan.

The Kenston School District proposal will meet the Straight A Fund goals in the following way: Student Achievement: We believe that school buildings and infrastructure can be more than houses of education, but actual education tools themselves. We believe that well thought-out investments in these infrastructures can offer direct savings for taxpayers, as well as be leveragable tools to further facilitate greater learning objectives in more authentic meaningful ways than textbooks and traditional classroom instruction. We believe that problem based learning with real world data and issues is far more effective with longer term retention and applicability to a changing world than specific process or application learning alone. We believe that beyond direct savings, considerations of energy use act as direct examples of real-world issues that all of our students will face regardless of their career paths; whether it be as consumers, policy makers or energy professionals. Through the project components, students will be exposed to rigorous content and unlimited opportunities to develop critical and creative thinking skills through real-world experiences and data access. Ensuring that course outlines and lesson design aligns with appropriate Ohio and National Learning Standards and explicitly teach 21st Century Skills for postsecondary and career readiness for our students will be the foundation of curriculum enhancements in the renewable energy content. Virtually available pre-vetted curriculum development will increase key concept inclusion and educator efficiency and incorporation, as well as replication across districts. Renewable energy course offerings and related resources will afford our students opportunities providing meaningful access to real world problems, data sets with projects increasing student interest and retention of long term valuable interdisciplinary critical thinking skills. Further, the proposed infrastructure will increase access and interaction with non district educational resources, research projects and related professionals further increasing correlation with educational activities and actual career paths Research has shown increased use of virtual testing, online assessment and full virtual courses trending across the country from K-12 to post-grad. Our web-resources and virtual course initiatives will further prepare our students for this changing educational landscape. The virtual resources themselves will allow quick efficient quantifiable tracking and assessment of gains. By design, these initiatives will utilize a modular flexible infrastructural approach to facilitate quick adaptation to changing needs and fast replication of models, principles and successes across the district and State. Spending Reductions: Financial savings will be specifically realized through energy savings generated by the additional wind turbine. This savings will continue well beyond the grant required five year forecast with certainty being added through the incorporation of pre-negotiated extended five year warranty and service plans and pre-negotiated service extension options to twenty years. The District will also have options for operational insurance further solidifying bankable savings. Further spending reductions will be realized by the reduction of three teachers (1 at the middle school and 2 at the high school). The introduction of Chromebooks will support the reduction of personnel and reduce the amount previously allocated for computer stations and labs. Continued savings will be evident in the expenses associated with facility operations through diligent monitoring and energy usage reductions associated with the high efficiency replacement parts (HVAC controller separately funded, LED lighting funded within this grant).

C) SUSTAINABILITY - Planning for ongoing funding of the project, cost breakdown

13. Financial Documentation - All applicants must enter or upload the following supporting information. Responses should refer to specific information in the financial documents when applicable:

a. Enter a project budget

b. Upload the Straight A Financial Impact Template forecasting the expected changes to the five-year forecast resulting from implementation of this project. If applying as a consortia or partnership, please include the five-year forecasts of each school district, community school or STEM school member for review.

c. If subsection (b) is not applicable, please explain why, in addition to how the project will demonstrate sustainability and impact.

N/A

14. What is the total cost for implementing the innovative project?

2,612,680.00 * Total project cost

* Provide a brief narrative explanation of the overall budget. The narrative should include the source and amount of other funds that may be used to support this concept (e.g., Title I funding, RttT money, local funding, foundation support, etc.), and provide details on the cost of items included in the budget (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc).

Requested Grant: $1,891,680 Matching Donation: $721,000 (Parker Hannifin Wind Turbine) Purchase of a wind turbine at a reduced amount of $100,000. Balance of the wind turbine equipment $721,000 donated from Parker Hannifin. Note, the valuation of wind turbine donation is $721,000 but due to previous Parker Hannifin depreciation their taxable donation is $400,000. Construction of the wind turbine: including installation and commissioning $95,000, utility interconnection $355,000, foundation $165,000, inspections and updates $100,000, engineering and owner's rep $100,000, legal costs $5,000, refurbishing $75,000, tower extension $150,000, and maintenance agreement and warranty $125,000. Total construction cost $1,270,000. Renewable Energy Course for 250 7th grade students: Purchase of curriculum materials at $200 per student $50,000. Note, Instructor provided at no cost to Kenston by Auburn Career Center. Digital Learning Course for 250 9th grader students: Purchase of curriculum materials at $200 per student $50,000. Upgrade of the campus wireless systems $75,000, note, the benefit of this infrastructure will benefit beyond this course, including but not limited to online assessment, security and other distant learning applications. Chromebooks for 250 students at $270 each $67,500. Student tuition for 250 students for the second semester of the 2013-2014 school year $50,000. STEM teacher professional development on the Kilowatts for Education website, for 50 teachers. Costs include meeting expenses, registration, travel, and mileage, estimated at $400 per teacher $20,000. Professional development materials for 50 teachers $60,000. Substitute costs for class coverage of 50 teachers to attend 6 training sessions at a cost of $110 per sub day (includes salary and fringe benefits) $33,000. Contractual services to the Renaissance Group for website development and upgrades $50,000. Installation of 5,935 LED lights ($28 per bulb) in classrooms and common areas at Timmons Elementary School and Kenston Intermediate School for $166,180. Budget costs have been derived from actual expense budgets, quotes and previous project related quotes and expenditures with inflation escalators as appropriate.

15. What **new/recurring costs** of your innovative project will continue once the grant has expired? If there are no new/recurring costs, please explain why.

74,820.00 * Specific amount of new/recurring cost (annual cost after project is implemented)

* Narrative explanation/rationale: Provide details on the cost of items included in the budget (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.). If there are no new/recurring costs, please explain why.

Yearly Average: $74,820 . Maintenance of the wind turbine $10,200 per year. After start-up capital costs are accounted for, the grant activities will be self sustaining with respect to the five year forecast. Warranties, operations and maintenance of the turbine during the initial five years are pre-capitalized in the purchase and beyond five years will be paid from a portion of the savings through pre-negotiated maintenance contract extensions. Course tuition fees and the salary and benefits for a high school proctor will be offset by the savings from 3 FTEs. $75,000 for tuition and $16,050 for salary and benefits of the high school proctor position. Additional Chromebooks for incoming 9th grade students will be offset by the savings from replacing computer lab stations. $67,500 for 250 Chromebooks at $270 each. Annual updates to the Kilowatts for Education website will involve contractual services with Renaissance Group $4800 annually, and additional training for new teachers estimated to be $8000 per year. LED light bulbs installed in FY14 have a 12 year life cycle and will not require any replacement costs. Budget costs have been derived from actual expense budgets and quotes.

16. Are there **expected savings** that may result from the implementation of the innovative project?

425,398.00 * Specific amount of expected savings (annual)

* Narrative explanation/rationale: Provide details on the anticipated savings (i.e. staff counts and salary/benefits, equipment to be purchased and cost, etc.)

The total amount of expected savings is $2,126,991 over the next 5 years. These savings include an estimated $86,525 in energy costs generated from the wind turbine, if the turbine operates at a conservative 90% availability at the average annual wind speed, and energy costs start at approximately .11 per kilowatt in FY15 with an estimated 2% increase per year for inflation. Savings in personnel costs average $266,852 over the next 5 years from the reduction of 2 FTEs at the high school, as a result of offering the digital learning course with a larger class size, and the reduction of 1 FTE at the middle school, as a result of collaborating with the Auburn Career Center to provide a certified instructor for the new renewable energy course. The savings in salary and fringe benefits are based on an average STEM teacher salary with 1% step increases to salary each year and approximately 5.4% annual increases to fringe benefits each year. Savings as a result of providing Chromebooks to incoming freshman instead of replacing computer lab stations with an estimated useful life of 5 years is expected to be $27,500 for each new class of Chromebooks. Computer lab replacement costs are estimated at $550 per workstation for 250 students. Savings resulting from the installation of 5935 LED lights at Timmons Elementary School and Kenston Intermediate School are estimated at $40,990 per year for 5 years. This includes $31,990 in energy savings each year, and an additional $9000 saved in maintenance, "re-lamping," and a reduction in heating and cooling costs. Savings have been derived from actual expense budgets, quotes and previous project experience and expenditures with inflation escalators as appropriate.

17. Provide a brief explanation of how the project is self-sustaining. If there are ongoing costs associated with the project after the term of the grant, this explanation should provide details on the cost reductions that will be made that are at least equal to the amount of new/recurring costs detailed above. If there are no new/recurring costs, explain in detail how this project will sustain itself beyond the life of the grant.

The wind turbine requested in this proposal is a one-time fixed cost for construction. Having experience with this process previously allows for realistic planning of sustainability. Specifically, economic

certainty has been addressed through budgeted, pre-negotiated five-year warranties and service plans with pre-negotiated service plan extensions. Additionally, the twenty year lifespan generates operational savings well in excess of anticipated expenditures associated with ongoing maintenance. Other portions of the proposal are also self sustaining. Personnel assigned to Kenston Middle School from Auburn Vocational School will be paid in subsequent years through vocational education dollars generated in cooperation with Auburn Vocational School. The cost of chromebooks will be offset by a combination of reduced computer lab replacement costs and savings gained from salary and benefits from the addition of an online course. Necessary wireless upgrades are a one-time fixed cost. Curriculum enhancements will also be a one-time expense. After initial consultation with MC2 School and Cleveland State University, in-district curriculum committees will address adjustment and enhancements to the vertical learning experience for the students. The impact of professional development for teachers to maximize the capacity for its data use and other resources on the Kilowatts for Education site will be sustained for the grant period and beyond utilizing peer to peer training. New hires will be able to quickly access this resource with initial trainee peer support. All community outreach and district conservation practices will be self sustaining by district personnel. The addition of LED lights, with a 12 year life will require less maintenance; will lower ongoing utility costs; will reduce heating and cooling cost and will result in ongoing lower maintenance for the district. Reinvestment of a portion of these initial savings through replication will self-sustain a trend in ongoing increased savings.

D) IMPLEMENTATION - Timeline, communication and contingency planning

18. Fill in the appropriate dates and an explanation of the timeline for the successful implementation of this project. In each explanation, be sure to briefly describe the largest barriers that could derail your concept or timeline for implementation and your plan to proactively mitigate such barriers. In addition, the narrative should list the stakeholders that will be engaged during that stage of the project and describe the communication that occurred as the application was developed.

Describe the ongoing communication plan with the stakeholders as the project is implemented. (Stakeholders can include parents, community leaders, foundation support and businesses, as well as educational personnel in the affected entities.)

* Proposal Timeline Dates

Plan (MM/DD/YYYY): Planning: 11/1/13-2/28/14

* Narrative explanation

Wind Turbine: Is an expedited process as the turbine is immediately available, existing pre-vetting of the project with local regulatory agencies and due to the team's previous successful experience implementing the District's and other partners' existing wind and solar projects. Location feasibility and initial engineering have already been completed. Key benchmarks will include finalizing engineering, confirmation of turbine refurbishment, obtaining final permitting, and creation of bid documents. As most of the planning work is already complete, in progress or in template form from previous projects, the only major pitfall for this phase is schedule slip. The schedule will be kept on track by no less than biweekly calls or in person meetings. This frequency may be increased as needed in key phases or if issues arise. Further, to increase efficiency, all related documents will be maintained and updated through an already proven on-line file system. Kilowatts For Education Resource Enhancement: Building on the existing kW4Ed BETA websites and resources, the team will evaluate and develop next steps based directly on team and program needs. Key benchmarks will be enhancement of the sites' curriculum resources in collaboration with Cleveland State, enhancement of educator access and polling of specific data streams and enhancement of member site data stream comparison tools. Major pitfalls could be coordination of partners needs/desires and schedule slip. Biweekly meetings, online-file-folder use and coordination services will keep the project on track. Curriculum: Plans for curriculum enhancements will begin immediately after grant award announcement. A curriculum team with representatives from various grade levels, buildings, content areas in the district. Lead committee chairs will be assigned to facilitate the process. A preliminary meeting with contacts from Cleveland State and the MC2 School will meet with district committee chairs to plan for the curriculum development process. Current Ohio and Common Core Learning standards will provide the framework for the renewable energy connections. Efforts will be made to extend curriculum activities across multiple content areas using STEM, STEAM or PBL strategies in lesson development. Ongoing meetings, using professional release time will allow team members to complete this task in early spring. Previous investments in curricular materials and availability of the Kilowatts for Education Resource and others will minimize the need to evaluate and purchase additional materials. The Assistant Superintendent will be responsible for the completion of this component of the grant proposal. Auburn Career Center will re-assign one full time teacher to Kenston Middle School to teach all 7th grade students a nine-week course on renewable energy resources, concepts, practices and careers. Planning for this course will begin in December 2014 using professional release time and consultation with Auburn Career Center, the MC2 School. The development of this course will be assigned to the curriculum team, with additional guidance from the Assistant Superintendent and the Middle School administrator. The development of a freshmen-level Science requirement, Renewable Energy, will be created for implementation beginning August 2014. This online course will be purchased and personnel assignments will be adjusted accordingly. The high school administrator and the core curriculum committee will research online courses and make a recommendation to the Assistant Superintendent by May 2014. LED retrofits planning already complete. Some project components may move into the implementation phase in advance of the listed planning end date. In general, all components will be expedited through all processes at the quickest pace possible regardless of listed end dates. This will further increase flexibility and resource availability if an issue should arise in a particular area.

Implement (MM/DD/YYYY): 2/1/13-8/31/14

* Narrative explanation

Wind Turbine This phase will include bids posting and awards through actual construction and commissioning broken down into four main categories: equipment preparation, site and foundation work, electrical interconnection and installation and commissioning, all of which except installation and commissioning will commence immediately upon award. Turbine Installation will occur in June/August during school recess. The major potential pitfalls will be schedule slip, competitive bid response and contractor performance. The already existing equipment and the prior experience of the team will be a major assets in this phase. Bid requirements, contracts and monitoring methods for construction will follow board established procedures and previously proven models. Advanced advertising and pre-bid meetings will be used to maximize bidder response. Although not mandated, the bid documents will encourage a single contractor for the construction work to facilitate trades coordination, efficiency and accountability. Contract integrated master schedules will drive and coordinate participants. Team meetings will be increased to weekly during the key components of this phase and The Renaissance Group will directly monitor all field work and approvals for progress and quality. Opportunities for student and partner involvement will be offered throughout. Kilowatts For Education Resource Enhancement: The general approach for implementation will be to test enhancements on a single site for replication to the full resource upon team acceptance and program goal compliance. Due to the modular infrastructure of the resource, modifications and optimizations can be accommodated relatively easily and quickly as they are tested with educators and students. A major advantage of the program is the team's prior experience with the resource and its associated tools. The major pitfalls will likely be timely testing of tools and contractor implementation of changes. Biweekly meetings, online-file-folder use and the resource tool infrastructure itself will keep the project on track. Curriculum implementation: All curriculum components of the grant can be addressed immediately in a planning process. Renewable energy upgrades to the curriculum will be ready for teacher/classroom access by March of 2014. New lessons using STEM pedagogy will be add to the pacing guides as they are developed. Course descriptions with pacing guidelines for the Middle School course will be ready for full implementation in August 2014. The high school digital course will be available to freshman students in August 2014. As part of a broader vision and related activities for technology expansion we will prepare our students for using technology as a tool for learning, course assessment and completion. Parallel instruction on use of chromebooks for this course will be offered by the district's Technology Integration Specialist beginning in the spring of 2014. LED retrofits to be complete immediately upon award. The Superintendent, the Treasurer, The Renaissance Group, Cleveland State University, MC2, Sodexo, other awarded Contractors, and the Kenston Board of Education will be directly responsible and accountable for completion as appropriate for their related particular project components.

Summative evaluation (MM/DD/YYYY): 9/1/14-9/30/14

* Narrative explanation

Although evaluations will continue well beyond the above dates, this date period will be used as a major benchmark evaluation for grant reporting and project forecasting purposes. All other grant reporting recommendations and requirements will be met. Wind Turbine : The summative evaluation for the construction phase will occur during the project's commissioning phase immediately following installation (summer 2014). The Renaissance Group in conjunction with a commissioning agent will primarily be responsible for the technical and quality confirmation of the project. Evaluation will continue through the entire life of the project through quarterly confirmation of power production and utility savings. Kilowatts For Education Resource Enhancement: Although evaluation and optimization will be ongoing by program and infrastructure design, formal team program reviews will occur on a quarterly basis. Quantifiable results will be gathered in the following areas: Educator and students program interface counts, core curriculum integration, knowledge gains and retention and partner access and replication. Conservation practices planning: Existing student, faculty and maintenance teams already work closely together to maintain and expand our conservation practices, including recycling programs, electrical power monitoring and examining office procedures which overly rely on hard copy documents. Planning for additional ways the Kenston community can be more responsive to our clean energy vision is an ongoing process. Student Councils, Envirothon club, Science clubs, teacher volunteer committees in the various buildings problem-solve ways to accomplish this in our daily behaviors. Planning for the introduction of LED lighting, and ultimately designate one of the elementary schools as an LED building, can begin upon notification of a grant award. The program evaluation itself will be used as a teachable moment through these entities and verified by the treasurer.

19. Describe the expected changes to the instructional and/or organizational practices in your institution.

Staff and student achievement, engagement, collaboration, real world relevance of pursuits and continued growth are core beliefs for our schools. The grant driven initiatives will enhance our existing programs and continue our district on these paths in the following ways: Increase institutional, curricular and resource sharing through programs like the Auburn Career Center teacher partnership, the Kilowatts for Education web resource sharing and the First Responder career readiness training, and the overall curriculum development and collaboration through the Cleveland State partnership. Both educators and students will increase their virtual resource utilization, learning and assessment literacy through the new virtual course requirement and replicable model creation. Similarly, educators and students alike will increase proficiency in utilizing real world data sets and problems including their integration into interdisciplinary curriculum sets, all driving improved problem solving and cross-discipline application of skills in an ever changing world. Lastly, students and educators will improve their ability to discover and incorporate "the cross-curricular teachable moments" and resources at hand such as, but not limited to, the use of existing campus infrastructures and living laboratories.

E) SUBSTANTIAL IMPACT AND LASTING VALUE - Impact, evaluation and replication

20. Describe the rationale, research or past success that supports the innovative project and its impact on student achievement, spending reduction in the five-year fiscal forecast or utilization of a greater share of resources in the classroom.

The proposed project can best be described as a next step enhancement to expand the capacity of an effective program already being implemented. Kenston aspires to provide every student with rigorous and explicit instruction and authentic experiences in the area of energy literacy and its impact on their future consumption, life-long habits, careers and decision-making as citizens. Purchased the first hybrid bus in the state of Ohio to provide a cleaner alternative to the traditional fuel option for school transportation. Pursued and received a federal grant for the installation of a utility scale wind turbine. The

process involved extensive collaboration with the US Department of Energy, the Ohio Historical Society and the Ohio Department of Development. Local collaboration with the Historical Society, and The US Department of Fish and Wildlife and the Ohio Department of Natural Resource was also required. Created a high level high school course named Alternative Renewable Energy with the understanding that our students would interact with real-time data collection and evaluation. This course is an elective. Using funds from the Innovative Grant, a utility net-measured data interactive 33.12 kilowatt solar photovoltaic array on our school campus was added. The array is divided into three main sub-arrays to maximize its benefit beyond mere cost savings: one larger array designed to be a fully functional example of a modern commercial net-metered array, a smaller student interactive solar tracker array specifically designed to maximize student interaction and a fixed reference array for the tracker. An additional solar thermal booster array was added to preheat water at our high school. Solar and wind energy is interfaced with our district's network for real-time data evaluation and manipulation by students, faculty and community. The data is also accessible to the community at large; locally; statewide; nationally and internationally through our participation/membership in the Kilowatts for Education Consortium. Targeted curriculum enhancements have been incorporated in K-12 programming; including a high school level elective course, Alternative Energy; a required 8th grade technology course through the addition of STEM-based units using a digital learning environment. These modules include problem-based, self paced learning in the areas of Sustainable Green Energy Production and Green Construction. Kenston High School was designated as a 2013 National Green Ribbon School for the many curricular and facilities initiatives in place which reflect the District's and building's commitment to be a living testimony of a "green" culture. Similar to other overarching District practices, our collective renewable energy efforts as a school community has been identified and named as Renew Blue. This symbol is used in various district and parent publications as a representation of our shared vision. A planned STEM professional development day will offer teachers the opportunity to learn how to maximize the use of renewable energy resources and data in all content areas. Systematic local conservation programs exists throughout the district and within each building. Ongoing recycling programs are collaborative efforts with faculty, student, food service and maintenance staff working together to manage this large task. Use of technology upgrades to reduce hard copy distributions. In all buildings, a reduction of paper in classrooms (use of ebooks), with parents (use of a parent portal), and in office-related procedures are frequently examined for green improvements. Student run recycling programs reinforce the district vision and solidify the culture of conservation related decision-making. Some of our school-wide incentive programs are classroom "watt watchers", "lights-out" days and "brown bag lunch" days serve to change conservation behaviors while saving funds.

21. Is this project able to be replicated in other districts in Ohio?

☑ Yes ☐ No

22. If so, how?

All districts can incorporate authentic real world learning to increase student interest, achievement and career readiness. All districts can replicate virtual learning concepts to improve student readiness. Most, if not all, districts can replicate shared resources strategies with trade and higher learning institutions. Most districts should be able to replicate facilities sharing strategies for overall community savings. All districts should be able to replicate STEM, cross-curriculum coordination and career readiness coordination into their educational strategies. 100% of Ohio's districts could replicate and benefit from energy conservation and efficiency retrofit projects. At a minimum, lighting and controls projects are internationally proven concepts with relatively short paybacks, even by commercial standards. About 40% of Ohio's districts could implement economically viable wind energy programs per PUCO wind resource maps. Although these programs clearly require higher initial capital investments, community engagement and overall effort; building on proven successful models like Kenston's existing project and State coordination, aggregation and purchasing power could lower these barriers. 100% of Ohio's districts could benefit from solar thermal and PV installations. State coordination, aggregation and purchasing power could increase the economic return for these projects. Even if districts can't implement their own renewable energy or research integration projects, many of the curricular benefits can be replicated and accessed through the kW4ed program at little to no cost. The general model could also be modified and replicated based on local interests, needs and current career readiness trends.

23. Describe the substantial value and lasting impact that the project hopes to achieve.

This project will have a long lasting impact on the Kenston School District including, but not limited to a long-term financial benefit. This grant proposal will save the district over $400,000 per year. The wind turbine alone will reduce the overall operating cost for the District, not just in the five year forecast but for many years to follow. The LED retrofit will also provide the district with an annual saving past just the five year forecast, while the already occurring energy audits will allow the District to realize further savings and plan next priorities. The project will allow us to further develop a unique learning experience and district identity for all Kenston students, while enhancing the instructional niche we have created in the Kenston School District and allow us to become a living laboratory destination and resource for other districts, businesses and universities for research and/or replication. Furthermore, the project with allow for vertical embedded core and goal curriculum requirements (7th and 9th grade) and opportunities (all grades) that will continue after the grant period has expired. This grant will allow us to explicitly instruct our students in energy issues, scientific evidence based inquiry and career opportunities associated with energy. The addition of a 7th and 9th grade required course will provide us with concrete evidence of student understanding while creating and sustaining a culture of environmental impact and stewardship extending beyond our walls. This proposal will support the ongoing efforts of the Kenston community to reduce our utility usage, expenditures and carbon footprint through our daily decision-making. In a pure financial sense, success of this will be measured as greater levels of our operational budgets can be redirected to our core mission; educating our students.

24. What are the specific benchmarks related to the fund goals identified in question 9 that the project aims to achieve in five years? Include any other anticipated outcomes of the project that you hope to achieve that may not be easily benchmarked.

Teacher collaborative teams have been established; allowing educator teams to work together. At the secondary level teachers work in departments and grade level teams to develop lessons, common and formative assessments. At the elementary level, collaboration takes place both by grade level and subject matter, examining, developing assessments, and data analysis/collection. Teams will work on the following objectives a) academic content standards; b) performance-based assessments; c) vertical STEM team Common Core State Standards. Professional development will afford teachers the opportunity to incorporate renewable energy and data in content areas. STEM curriculum will be incorporated in K-12 programming; utilizing data for student progress monitoring. We will use data as a "best practice" of ongoing and vertical measure of student progress and growth. Easily accessible data will allow teacher teams to monitor interventions, extend learning, and closely monitor annual growth for students and utilize partnerships and their resources to implement innovative instructional models. Curriculum Planning/Implementation Benchmarks: 1a: Teacher Collaborative Teams identified (in progress) 1: Team meeting dates/agendas established (12-13) 1c: Vertical articulation 2a: Curriculum Review (1-14) 2b: Standards identified (In progress) 2c: Pacing guides/ alignment (1-14) 3a: Collaboration with shared partners (1-14) 3b: Cleveland State and MC2 STEM /site visit 4: Materials review/ curriculum purchasing (3-14) 5: Teacher professional development vertical alignment (3-14) 6a: Lesson Design STEM (4-13 to 6-14) 7a: Classroom implementation (9-14) 7b: Data driven progress monitoring (on going) 7c: Pre-post assessments (on going) 8a: Integrated Technology (9-14) 8b: Digital learning (on going) 9a: Evaluation/ assessments (9-14) 9b: Online assessments (on going) Wind Turbine Benchmarks: 1: Planning and engineering finalization (12-13 to 2-14) 2: Permitting finalization (1-14 to 2-14) 3: Bid documents finalization and posting (2-14) 4: Bid awards (3-14 to 4-14) 5: Master construction schedule finalization (4-14) 6a: Turbine refurbishment confirmation (1-14 to 5-14) 6b: Turbine foundation completion (6-14) 6c: Electrical interconnect completion (6-14) 7: Turbine installation (7-14) 8 Turbine Commissioning including finalization of regulatory inspections and utility interconnect agreements (8-14) 9: Data systems integration (6-14 to 9-14) 10: Validation of savings (Quarterly after commissioning) 11: Student, educator and partner engagement (ongoing through project) 12: Curriculum integration (See below) LED Lighting Retrofit Benchmarks: 1: Planning (already completed) 2: Student engagement baseline utility bill review. (upon Grant Award, 12-13) 3: Student Engagement (sample installations, guided) (1-14) 4: Full retrofits (1-14 to 2-14) 5: Student engagement energy savings validation (Treasurer verified) (Spring 2014) 6: Curriculum integration (see below) Kllowatts For Education Web Resources Enhancement Benchmarks: 1a: Team training, review and introduction to existing tools (Already In Progress through 1-14) 1b: Curriculum and core alignment validation (Ongoing) 1c: Needs, improvements assessments and planning coordination with staff and partners. (Already In Progress through 1-14) 2: Release raw data acquisition and sorting tools (2-14) 3: Release member site comparison tools (2-14) 4: Integrate developed curriculum resources and templates (Ongoing) 5: Integrate new turbine data streams (9-14) 6: Team training (9-14, updated yearly) First Responder and Rescue Partnership Benchmarks: 1: Conduct initial training utilizing existing resources (approx. 75 participants 11-5,6,7-13) 2: Long-term program development (summer-14 with yearly updates) 3: Launch new training resource turbine availability and associated programs (Fall-14) 4: Formalize certification tracts, providers and partnerships (ongoing)5: Facility training revenue sharing (ongoing)

25. Describe the plan to evaluate the impact of the concept, strategy or approaches used.

* Include the method by which progress toward short- and long-term objectives will be measured. (This section should include the types of data to be collected, the formative outputs and outcomes and the systems in place to track the program's progress).

* Include the method, process and/or procedure by which the program will modify or change the program plan if measured progress is insufficient to meet program objectives.

Curriculum Planning and Implementation: Quarterly updates and progress assessment of the curriculum, including online learning courses will be led by the Assistant Superintendent and communicated to the project team. The project team will assess progress and make quarterly adjustments using professional development and communication with all stakeholders. Quantifiable progress will be verified based on benchmark derived baselines, targeted progress goals and common core achievement. This same strategy will be utilized for each of the curriculum components. Renewable Energy Course: Provide students with innovative and effective learning opportunities creating a culture of innovation. Through student growth prepare students for college and careers in the area of renewable energy; benchmarking their knowledge of renewable energy and monitoring the number of students entering college and specifically the conservation and renewable energy field. Wind Turbine Evaluation: Confirmation of construction timeline and budgetary adherence and completion, regulatory compliance, continued turbine operation at manufacturer power curves at projected or better availability rates, data stream integration, student and partner involvement counts and confirmation of projected savings on a quarterly basis and verified by the Treasurer. LED Retrofit Evaluation: Confirmation of construction timeline and budgetary adherence and completion, student and partner involvement counts and confirmation of projected savings on a quarterly basis and verified by the Treasurer. Kilowatts For Education Resources Evaluation: Adherence to benchmark completion dates, utilization verification by Kenston educators and partners; student, educator and partner site hits, training sessions inclusion of site evaluations, replication of data source sites, additions of curriculum and other resources, participation of partners on a site resource contribution level, levels of site facilitated collaboration and sharing and success in overall curriculum objectives. Although many of these measures are hard to quantify, partner surveys on a yearly basis and analysis of overall trends will be major measures of success. First Responder and Rescue Partnership Evaluation: The Fire and Rescue training will be monitored and measured through the use of the facility, head counts of trainees on a quarterly basis through partnership with the District, through participant and organizational surveys focused on their career readiness objectives and by the confirmation of the programs budget positive adherence by the Treasurer. Overall conservation practices will continue to be monitored by the student led initiatives throughout the campus with financial implications being verified by the Treasurer. The team plans to continuously monitor and modify it's evaluation strategies and methods as required to maximize the quantification of results and realized progress in overall program goals. Go Green, Go Blue, Go Global!

By virtue of applying for the Straight A Fund, all applicants agree to participate in the overall evaluation of the Straight A Fund for the duration of the evaluation timeframe. The Governing Board of the Straight A Fund reserves the right to conduct evaluation of the plan and request additional information in the form of data, surveys, interviews, focus groups, and any other related data to the legislature, governor, and other interested parties for an overall evaluation of the Straight A Fund.

PROGRAM ASSURANCES: I agree, on behalf of this applicant agency and/or all identified partners to abide by all assurances outlined in the Assurance section of the CCIP. In the box below, enter "I Accept" and indicate your name, title, agency/organization and today's date.

I Accept Robert A. Lee, Ph.D.Superintendent Kenston Local Schools October 25, 2013