## Budget

Pettisville Local (047076) - Fulton County - 2014 - Straight A Fund - Rev 6 - Straight A Fund - Application Number (87)

### U.S.A.S. Fund #:

#### Plus/Minus Sheet (opens new window)

#### Pettisville Local (047076) - Fulton County - 2014 - Straight A Fund - Rev 0 - Straight A Fund - Application Number (87)

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**Adjusted Allocation**: 0.00

**Remaining**: -125,652.00
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: Net Zero Saves Dollars: Earn Green by Going Green

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.

The "Net Zero Saves Dollars: Earn Green by Going Green" project will create ongoing savings of over $22,000 per year, the equivalent of a half mill of tax in the Pettisville School District, by converting gas boilers to run on excess electricity generated by a wind turbine owned by the district. Pettisville Schools new 2011 LEED Gold PK-12 facility is powered by an Aeronautica 750 kW wind turbine that provides energy for all of the building's power and geothermal functions with the exception of two natural gas boilers. Replacing the natural gas boilers with electric boilers, and powering those boilers with excess generation, will make the site a truly "net zero energy site", where more energy is produced than used, and with only a six year payback, create ongoing financial savings as well.

3. Total Students Impacted:

539

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

First Name, Last Name of contact for lead applicant: Dr. Stephen Switzer
Organizational name of lead applicant: Pettisville Local Schools
Unique Identifier (IRN/Fed Tax ID): 047076
Address of lead applicant: 232 Summit Street Pettisville, OH 43553
Phone Number of lead applicant: 419-446-2705
Email Address of lead applicant: sswitzer@pettisvilleschools.org

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

First Name, Last Name of contact for secondary applicant: NA
Organizational name of secondary applicant: NA
Unique Identifier (IRN/Fed Tax ID): NA
Address of secondary applicant: NA
Phone number of secondary applicant: NA
Email address of secondary applicant: NA

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.

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.

The project director is Dr. Steve Switzer, who is in his 32nd year as superintendent at Pettisville. During that time he has written, secured, and administered numerous grants including: An ARRA Grant for Wind Turbine ($1,150,000). State Capital Budget Grant for Wind Turbine ($125,000), as well as various grants for handicapped access, asbestos abatement, emergency repair, computer wiring and the such. He has directed several building programs in 1994, a $2,000,000 Pettisville School Foundation Building Addition and in 2011, a $22,000,000 OSFSC PK-12 97,000 SF Building. He also, in his capacity as executive director of the Pettisville School Foundation, directed a fund raising effort to construct a $900,000 connector Atrium between the original and 2011 buildings. The Buehrer Group Architects and Engineers, Maumee, Ohio, will serve as the design specialists for the boiler conversion. The Buehrer Group was the architect for the Pettisville PK-12 building project as well as electrical engineers on the wind turbine project.

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)

- Student achievement
- 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 research-based - never implemented in your district or community school but proven successful in other educational environments
- Mixed Concept - incorporates new and existing elements
- 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.

The "Net Zero Saves Dollars: Earn Green by Going Green" project proposes to install two electric boilers (in place of natural gas boilers) at Pettisville Schools to take advantage of overproduction of electric power by the district owned American built Aeronautica 750 kW wind turbine. Boilers replaced include: --- The 2011 building has a natural gas boiler that serves as a primary heat source for several areas of the building (group restrooms and greenhouse) and serves as a backup booster for the geothermal system that heats and cools the remainder of that building. --- The 37,000 SF "north wing" is heated by a natural gas hot water boiler. The project will install electric boilers in both areas that will replace the natural gas with electric. The existing natural gas boilers will be kept as backups. (An electric boiler was not planned for the PK-12 building because grant funding for the turbine had not been secured at the time of design. The north wing was not a part of the building project.) Installation of the two electric boilers will make the Pettisville site a "net zero" energy site, meaning more energy will be produced on site than is used. Relevant information: --- The school facility uses approximately 860,000 kWh annually. --- The Aeronautica 750 kW turbine (in operation since February 2013) is projected to generate between 1,000,000 to 1,300,000 kilowatt hours annually. It is this unused overage that will be maximized for savings. The electric utility will not purchase power from the school. The district is allowed to produce only the power needed to offset the electric bill.

12. Describe how it will meet the goals(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 "Net Zero Saves Dollars: Earn Green by Going Green" project will reduce energy costs by approximately $22,000 annually by allowing the district to utilize excess electric production—at virtually no added cost—to displace the natural gas currently being purchased. As noted earlier, the electric company will not "purchase" excess energy from the district. While limited surplus power credits can be carried forward, energy production in the end can be no more than would offset the electric billing. This creates the potential situation where electric credit is lost or the turbine is turned off. The project cost is around $125,000 and the estimated annual savings is projected to be $22,000, the average annual cost of natural gas. The simple payback is 5.7 years which is well below the traditional ten or fifteen year benchmark for project viability.
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.

NA

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

125,652.00 * 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, RTT 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.).

The budget has two elements, design (purchased services) and capital outlay. The design costs of $9,000 cover the design and bidding costs. The remaining $116,652 figure is the estimate for the actual work. This figure was developed by securing estimates on the proposed work and increasing that amount by 10% to include contingency and cost variance.

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.

0.00 * 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.

No recurring costs are anticipated by the implementation of this project. While there may be occasional ongoing maintenance or repairs, electric boilers are traditionally low maintenance and long life implements. Any repair costs would be funded by the district's maintenance budget.

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

22,000.00 * 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.)

This amount of savings is anticipated to vary based on the cost of energy but, generally the savings are expected to increase as energy costs increase.

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.

As noted above, any maintenance or repair costs, which are anticipated to be minimal, will be borne by the district's maintenance funds. The district has both a PI fund and a half mill maintenance fund. Once installed, this project will create a sustainable source of cost reduction as sure as the wind itself.

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 longest 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): 05/30/2014

* Narrative explanation

The Earn Green by Going Green project will be formally designed during the first two months after grant approval and put out to bid during the third. Stakeholders involved include the board of education, representing the public, maintenance staff, design professionals, and administrative staff. All were involved with the development of this project and will be involved in the implementation.

Implement (MM/DD/YYYY): 06/30/2014

* Narrative explanation

Installation of the boilers will take place during the month of June, 2014. The project will be completely finished and installed by the end of the fiscal year and ready for the coming heating season.

Summative evaluation (MM/DD/YYYY): 06/30/2014

* Narrative explanation

The summative evaluation will have two elements. The first will be at the project close out. When all of the requirements of the installation and necessary communications with the energy management system have been met and startup has been successfully completed, the first step will be complete. The project will have met its tangible objectives. The second will be the ongoing process of measuring the savings going forward to assure that the actual savings projected have been met. The measure of the element will be the near elimination of natural gas costs and the lack of increase in electric bills paid to the utility.

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

The major benefits will be ongoing savings that can either be used to reduce outlay or transfer the expenditure to instructional areas. A secondary benefit is in the curricular value of having this and other energy conserving building elements. It assists the staff to teach stewardship of natural resources. Pettisville Schools teaches about the benefits of our new Gold LEED rated school facilities in terms of being good stewards of the environment and modeling energy conservation practices. Students will receive a minimum of 10 hours of instruction annually on this topic. A specific curriculum linking to the Ohio science standards will be implemented to include lessons related to energy conservation in the 2011 facility. The goal is to provide Pettisville students with experiences related to the real world and by utilizing the new K-12 building to help students develop a "green" way of thinking and fundamentally reduce their carbon footprint. Hopefully this mindset can transcend from students' routine way of how "green" living is practiced daily at school into their homes and the community. The "Net Zero Saves Dollars-Earn Green by Going Green" project will illustrate how practicing the correct thing environmentally can also result in actual dollar savings.

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.

It is anticipated that annual savings will be in the $22,000 range and will be ongoing and increasing. This entire grant application is based on simple premise: if one is able to replace something that was purchased with something that was available at no cost but unused, savings will result. It would be good to write many academic paragraphs about logic, research, or rationale, but this concept has been tested simply, succinctly, and in few words. It is hoped that this is acceptable.

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

Yes

22. If so, how?

The answer to the "replicable" question would be a limited "yes." The project would be replicable in districts that have an excess of wind generated power.
23. Describe the substantial value and lasting impact that the project hopes to achieve.

Pettisville Schools is seeking to be good environmental stewards of available resources. It is hoped that through these actions, the district will both truly conserve natural resources and will use these actions as teaching tools for 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.

The projected savings of $22,000 per year should grow over the years allowing those dollars to be saved or allocated to other areas. A second area is the curricular area that has been described earlier. Hopefully this district both practices good stewardship with resources and teaches the same to students. A third area, but an important symbolic one, is when district residents see the wind turbine moving, they know that it is a symbol of efforts being made to conserve both dollars and energy. Projects such as this serve to solidify that effort.

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.

The district will continue to keep records of energy use and expenditures and compare them with past usage. Extensive records of utility usage and building fuel use have been kept for many years for both the previous and current facilities. Such records allow monitoring of usage and determine changes necessary and recognize problem areas.

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.

Dr. Stephen S. Switzer, Superintendent, Pettisville Local Schools October 24, 2013