Building Renewal Grant Application

Initial Submission Date: 6/10/2013 12:12:56 PM **Application ID:** 603
Resubmittal Date:

Please provide as much of the requested information as possible. SFB staff will assist in developing required information that is not currently available.

District Name: Tolleson Elementary District

Superintendent: Dr. Lupita Hightower

Contact Person: James Serbin

Contact Phone Number: 623-533-3930

Contact Email: jserbin@tesd.k12.az.us

School Site: Desert Oasis

Buildings: 9999 School Wide

Application Title: Repair Energy Management System

Description of Problem

Please include a detailed description of the issues, as well as a description of and a copy of any professional studies, citations or reports from government entities, recommended solutions, and any cost information or estimates. If additional space is needed, please attach.

The control system at Desert Oasis is designed to run on Niagara platform (central computer) with York controllers.

Issues:
1)The Niagara software is a demo version and is not licensed to the district. The demo version expires June 2014.
2)An investigation was performed, verifying communication between sensors & controllers and controllers & routers. 23 units out of total of 64 units are inaccessible from the central computer (front-end) at the district, and cannot be controlled (change set-points, change schedule etc.) by the district personnel.
3)The hard-wired connections between controller and router are disrupted. The wires are spliced and some wires are completely disconnected.
4)The financial impact of the disrupted communication is at least $13K per year. The loss is due to current control system's inability to manage schedule or change set-points to mitigate demand charge and/or reduce KWH consumption.

Solution:
1)The district has two options to fix the control system.
a.Replace the non-communication controllers and sensors with new controllers and sensors, with new Niagara software to integrate the controllers.
b.Replace all the controllers with BacNet Thermostats and integrate thermostats with JACE 600, which becomes the district's front-end.

Cost:
1)The estimated cost to replace non-communicating controllers (23) with new Niagara front-end with integration and programming is $63,000 with breakdown as below:
a.Controller - $23,000
b.Niagara Software - $10,000
c.Labor (Installation)- $15,000
d.Integration & Programming- $15,000

2)The estimated cost to replace all controllers (64) with new JACE 600 is $53,500 with breakdown as below:
a.BacNet Thermostat -$19,500
b.JACE 600 - $4,000
c.Labor (Installation) - $15,000
d.Integration & Programming - $15,000

Recommendation:
BESP,LLC recommends district replace all controllers with BacNet Thermostat with JACE 600 for the following reasons:
a.Cost-effective
b.Easy to maintain
c.Cheaper to replace
d.BacNet Compatible
e.JACE 600 can be integrated with controller if district decides to use controllers with future units.

The estimated Cost is $53,500.00

Project Category: HVAC

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Are any of the above-described issues in buildings or part of buildings that are leased to another entity, including a district sponsored charter school? N

Available Funding

Current unencumbered building renewal fund balance (Fund 690):	$0.00
Amount of Local funds planned for this project	$0.00

Please outline any associated insurance coverage.

Liaison: Breuer gbreuer@azsfb.gov 602-542-6139

Superintendent Printed Name

Superintendent Signature Date