



Rec 2/2/11

1

MTSU Clean Energy Initiative Project Funding Request

There are five (5) sections of the request to complete before submitting.

1. General Information	
Name of Person Submitting Request	
Ray Wiley	
Department/Office	Phone # (Office)
Campus Recreation	898-5701
MTSU Box #	Phone # (Cell)
556	785-7805
E-mail	Submittal Date
rwiley@mtsu.edu	1-31-11

2. Project Categories (Select One)			
Select the category that best describes the project.			
X	Energy Conservation/Efficiency		Sustainable Design
	Alternative Fuels		Other
	Renewable Energy		

3. Project Information	
<p>a. Please provide a brief descriptive title for the project.</p> <p>b. The project cost estimate is the expected cost of the project to be considered by the committee for approval, which may differ from the total project cost in the case of matching funding opportunities. Any funding request is a 'not-to-exceed' amount. Any proposed expenditure above the requested amount will require a resubmission.</p> <p>c. List the source of project cost estimates.</p>	
3a. Project Title	
Blast Hand-Dryers Replacement for Paper Towels	
3b. Project Cost Estimate	
\$11,270	

3c. Source of Estimate

Comac Corporation Inc. and Service Solutions

4. Project Description

(Completed in as much detail as possible.)

- a. The scope of the work to be accomplished is a detailed description of project activities.
- b. The benefit statement describes the advantages of the project as relates to the selected project category.
- c. The location of the project includes the name of the building, department, and/or specific location of where the project will be conducted on campus.
- d. List any departments you anticipate to be involved. Were any departments consulted in preparation of this request? Who? A listing may be attached to this form when submitted.
- e. Provide information for anticipated future operating and/or maintenance requirements occurring as a result of the proposed project.
- f. Provide any additional comments or information that may be pertinent to approval of the project funding request.

4a. Scope: Work to be accomplished

This project will require the removal of all paper towel dispensers from 10 bathrooms located at Campus Recreation. Additionally, this will require the installation of 14 Blast (High-efficiency) hand dryers at each location listed below:

2 needed in main lobby 1M/1F

4 needed in old locker room 2M/2F

4 needed in new locker room 2M/2F

2 needed in upstairs bathroom 1M/1F

2 needed in outdoor pool 1M/1F

4b. Scope: Benefit Statement

This is a cost saving project that would eliminate paper towels in 10 bathrooms which would reduce waste, reduce trash that will be required to be removed, significantly reduce trash in land-fills, and reduce man hours needed to pick up and dispose of trash. A side benefit will be the elimination of work orders to remove paper towels that clog toilets at the recreation center.

4. Project Description (continued)

4c. Location of Project (Building, etc.)

The hand dryers will be located in the lobby, pool bathrooms, new lobby bathrooms, upstairs bathrooms, and outdoor pool bathrooms.

4d. Participants and Roles

Mr. Steve Gilsdorf-Service Solution supervisor. I have worked with Steve to acquire the usage numbers for our facility and the projected cost in order to report accurate cost savings.

Additionally, I have secured hand dryer price quotes from Mr. Kevin Thompson. Kevin works with Brookmeade Hardware and Supply Co. Kevin has provided the product information for the hand dryers.

4e. Student participation and/or student benefit

This proposal was submitted with the help and feedback provided by MTSU Graduate Student Mallory Jones and Undergraduate Students Brandon Batts and Katie O'Neil. These students recognized the opportunity to reduce waste that is filling up our landfills and to save the university and the Campus Recreation Department money by reducing the cost associated with participants drying their hands after hand washing.

4f. Future Operating and/or Maintenance Requirements

This product comes with a 10-year warranty and is made out of a cast-iron cover which is extremely durable.

*See hand out A

4g. Additional Comments or Information Pertinent to the Proposed Project

Campus Recreation is dedicated to the pursuit of advanced technology using green energy sources as they become available. Our goal is to save the university and our department money and decrease the amount of trash that is filling up our land-fills. Presently, we do not have the needed funds to make the conversion from using paper towels to these high-efficient hand dryers. Any funding allocated could be of significant benefit to us as we try to improve our dependency on a large volume of paper products. If we are successful in acquiring the needed funds for this proposal, Campus Recreation is dedicated to making this conversion as soon as possible.

5. Project Performance Information

Provide information if applicable.

- a. Provide information on estimated annual energy savings stated in units such as kW, kWh, Btu, gallons, etc.
- b. Provide information on estimated annual energy cost savings in monetary terms.
- c. Provide information on any annual operating or other cost savings in monetary terms. Be specific.
- d. Provide information about any matching or supplementary funding opportunities that are available. Identify all sources and explain.

5a. Estimated Annual Energy Savings (Estimated in kW, kWh, Btu, etc.)

Estimated annual energy savings will be based upon eliminating the cost of manufacturing, purchasing, and disposal of the current paper towels that are used by our department. This proposal is to help eliminate the waste of our natural resources by decreasing the amount of paper products that are used and then disposed of by the university.

5b. Annual Energy COST Savings (\$)

Paper Towel Cost \$3,840

Blast Operating Cost \$160

Annual Operating Savings \$3,680

14 dryers x \$805=\$11,270

Payback Period = \$306 x 37 months = \$11,322

*See hand out B for more details

5c. Annual Operating or Other Cost Savings. Specify. (\$)

We believe this project will result in a significant savings due to the elimination of paper towels in our facility. i.e. 20 cases of multi-fold @ a cost of \$16/case = \$320 per month x 12 months = \$3,680 annual savings.

20 bundles per case. Each bundle contains 200 paper towels.

200 x 20 = 4000 paper towels per case x 20 cases = 80,000 paper towels used per month.

80,000/2.5 paper towels = 32,000 hand dryings/ 30 days = 1,067 hand dryings per day

1,067 hand dryings per day x .0004 cost of hand dryer per use = 0.4268 cents per day

\$16 x 20 cases = \$320/30 days = \$10.67 per day in paper towel use

5d. Matching or Supplementary Funding (Identify and Explain)

N/A

B·L·A·S·T

Power · Design · Innovation

Built with nature in mind



REDEFINING HAND DRYERS

- ➔ High powered - dries your hands in 10 seconds
- ➔ Cast iron cover - virtually indestructible
- ➔ Universal voltage from 115V - 230V (auto sensing circuitry) - only one model to stock
- ➔ Costs 25X less than paper towel to operate
- ➔ Uses 1/6th the energy of conventional dryers
- ➔ 10 year warranty - the best warranty in the business
- ➔ Smaller footprint than most high speed dryers

Comac Corporation Inc.
P.O. Box 8287
Warwick, RI, 02888
U.S.A.
Tel: (401) 461-7900
Fax: (401) 461-7700
1-800-977-5306

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HANDOUT A

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COST COMPARISON & SAVINGS CALCULATION

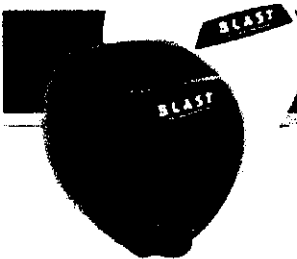
TYPICAL WASHROOM

3 STALLS, 2 SINKS, 1 PAPER DISPENSER OR 1 HAND DRYER

Paper towel cost per year = 15 cases X \$47/case = \$705 + 25% handling cost = **\$881**

Number of towels used per year = 15 cases X 3750 sheets/case = **56,250 towels**

Number of hand dryings per year = 56,250 / 2.5 towels per dry = **22,500 hand dryings**



B·L·A·S·T
Power. Design. Innovation.

vs. Paper Towels

Capital cost

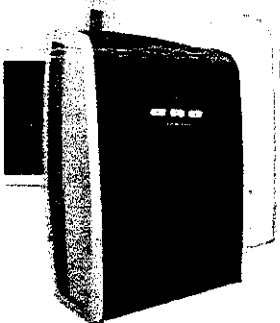
BLAST hand dryer	\$655
Installation	\$150
Total	\$805

Operating cost per year

Electricity cost per cycle	\$.0004
X hand dryings per year	22,500
Total	\$10

SAVINGS

Paper towel cost	\$881
BLAST operating cost	- \$10
Annual operating savings	\$871
Monthly savings	\$73
Payback period = 805/73 = 11 months	
Operating savings over 10-year hand dryer warranty period	\$8,710



ONE
THE MODULAR DRYER

vs. Paper Towels

Capital cost

ONE hand dryer	\$555
Installation	\$150
Total	\$705

Operating cost per year

Electricity cost per cycle	\$.0013
X hand dryings per year	22,500
Total	\$30

SAVINGS

Paper towel cost	\$881
ONE operating cost	- \$30
Annual operating savings	\$851
Monthly savings	\$71
Payback period = 705/71 = 10 months	
Operating savings over 12-year hand dryer warranty period	\$10,212

Paper towel handling cost based on industry average of 25%. Includes cost of generating requisitions and purchase orders, receiving, storing, servicing dispensers, collecting and disposing of used towels but does not include any incremental costs for plumbing repairs due to blockages caused by paper towels. Hand drying calculations based on industry standard 3750 multi-fold towels per case and average 2.5 towels used per hand drying. BLAST electricity use based on 10-second hand drying cycle and dryer consumption of 1450 watts. ONE electricity use based on 30-second hand drying cycle and dryer consumption of 1450 watts. Electricity costs based on nominal \$0.11/kWh rate.

