

# SUSTAINABILITY INITIATIVES BY STUDENT ORGANIZATIONS FUNDING PROPOSAL

## Part I - General Information

<b>Name of Student Organization</b>	Environmental Coalition
<b>Contact/Responsible Person</b>	Ibrahim Mohamed
<b>Contact Office Held/Title</b>	Student Member
<b>Contact Email Address</b>	lbemoh77@vt.edu
<b>Contact Telephone Number</b>	703-975-7065

## Part II - Project Cost Information

Estimate Cost of this Proposal	\$70,070	See Part III.C
Estimated Savings –	\$17,089.44 in year 1	See Part III.D
<b>Net Cost of this Proposal</b>	<b>\$52,980.56 in year 1 (\$0 total net cost)</b>	

## Part III - Supporting Information

A. Please describe your sustainability initiative and attach supporting documentation.

My sustainability proposal is to replace the current less efficient fluorescent lights inside Barringer, Johnson, Miles, Newman and Vawter Halls with new high efficient LEDs. The simple payback period is about 4.1 years.

B. How does this initiative help to achieve the goals of the Virginia Tech Climate Action Committee Resolution and Sustainability Plan?

My proposal supports the Climate Action Commitment, specifically regarding point 4: "Virginia Tech will work toward these emission reduction targets through improved energy efficiency, reduction of energy waste, replacement of high-carbon fuels, and other measures identified in the VTCAC."

It would also support the Virginia Tech 5-Year Energy Action Plan, in that it will contribute toward overall energy reduction and retrofit projects on campus.

C. What is the cost of your proposal? Please describe in adequate detail the basis for your cost estimate.

The cost of my proposal is \$70,070. I calculated the cost by getting the sum of the material cost and the installation cost per fixture, and multiplying it by the number of fixtures: 637 (1 light in each room, 637 rooms between the 5 halls). I obtained the cost numbers from the Associate Director of Facilities Todd Pignataro and the Housing Maintenance Manager William Barnett. The cost per building is as follows: Barringer \$13,200; Johnson \$11,600; Miles \$12,540; Newman \$13,530; and Vawter \$19,140. See attachment for detailed calculations.

D. Will your proposal produce cost savings for the University? If so, how much? Please describe in adequate detail the basis for your savings estimate.

My proposal will certainly produce savings for the university. LED lights don't need maintenance, whereas the current lights must be replaced every two years by electricians. My proposal will also result in energy cost savings as well, since LEDs use less wattage. I calculated first year energy cost savings of \$8649.19 by multiplying kilowatt hours saved per year by cost per kilowatt hour. I also calculated \$8440.25 in annual savings on maintenance by multiplying the cost of maintenance for a single fixture by the number of fixtures. When the energy savings and maintenance savings are summed, it results in first year savings of \$17,089.44. The simple payback period is 4.1 years. See attachment for detailed calculations.

E. Is this funding request an Ongoing or One-Time change **(please check one)**?

**One-time**                       **Ongoing**

F. Is funding available for this request from another source? If yes, describe the funding (source, amount, etc.)  
No

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### Part IV- Requestors/Reviewers

**Ibrahim Mohamed (Environmental Coalition)**

Prepared By (Name of Contact for Student Organization)

Date: 11/08/2017

**William Barnett (Housing Maintenance Manager, Division of Student Affairs)**

Reviewed By (Name of Appropriate University Official)

Date: 11/08/2017

**Denny Cochrane (Sustainability Program Manager, Office of Sustainability)**

Reviewed By (Name of Office of Energy and Sustainability Representative)

Date 11/20/2017