

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM

Part I- General Information:

Name of Student Organization	Environmental Innovation at Virginia Tech
Contact/Responsible Person	John Stout
Contact Office Held/Title	President
Contact Email Address	johns6@vt.edu
Contact Telephone Number	240-606-5213

Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

This initiative aims to utilize funding for the replacement of overhead fluorescent lights in all 518 dorm rooms in **Pritchard Hall** for energy-efficient LED lights. The payback period was calculated to be **4.7 years**. Switching current overhead lights for LED lights would not only improve light efficiency, but also significantly reduce greenhouse gas emissions. GHG emissions associated with overhead lights in Pritchard were calculated to be significantly lower if LED lights were to be implemented.

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

This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing overhead lights in Pritchard, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by over 30,000 pounds of CO₂ per year and help further progress reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

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

The initial cost of this proposal is \$41,730.08. This cost includes price for the light (manufacturing, shipping), as well as labor. All 1,036 individual lights would have a collective cost of \$22,305.08, and labor would cost \$19,425 with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.

Savings for the university per year would come out to \$8,831.90 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, approximately 32,723.91 pounds (16.36 tons) of CO₂ would be prevented from emitting to the atmosphere. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout

11/15/2018

Prepared By (Name of Contact for Student Organization)

Date

Reviewed By (Name of Appropriate University Official)

Date

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

Date

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM

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Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

This initiative aims to utilize funding for the replacement of overhead fluorescent lights in all 410 dorm rooms in **Lee Hall** for energy-efficient LED lights. The payback period was calculated to be **4.7 years**. Switching current overhead lights for LED lights would not only improve light efficiency, but also reduce greenhouse gas emissions. GHG emissions associated with overhead lights in Lee were calculated to be about 25,000 pounds lower if LED lights were implemented.

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

This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing overhead lights in Lee, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by a calculated 25,901.17 pounds CO₂ per year and help further progress reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

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

The initial cost of this proposal is \$33,029.60. This cost includes price for the light (manufacturing, shipping), as well as labor. All 820 individual lights would have a collective cost of \$17,654.60, and labor would cost \$15,375 with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.

Savings for the university per year would come out to \$6,990.50 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, approximately 25,901.17 pounds (12.95 tons) of CO₂ would be prevented from emitting to the atmosphere. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout

11/15/2018

Prepared By (Name of Contact for Student Organization)

Date

Reviewed By (Name of Appropriate University Official)

Date

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

Date

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM

Part I- General Information:

Name of Student Organization	Environmental Coalition
Contact/Responsible Person	Gabrielle Vitale
Contact Office Held/Title	Student Member- Earth Week Coordinator
Contact Email Address	Vgabby5@vt.edu
Contact Telephone Number	908-391-9131

Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

My sustainability initiative is to replace the fluorescent lights over the sinks in 167 rooms in Vawter Hall with more efficient LED lights, as well as change the current pull string switches that are easily damaged.

B. How does this initiative help to achieve the goals of the Virginia Tech Climate Action Commitment 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.

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

The one-time cost of my proposal is \$23,380 and this was obtained with assistance from the Associate Director of Facilities Todd Pignataro.

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 in both maintenance and energy savings. LED lights don't need much 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. The annual cost savings is estimated at \$3,117. The simple payback period is 7.5 years.

In addition to the maintenance savings from the lights themselves, there has also been a lot of time spent by maintenance during the year fixing the switches that have to be manually pulled. With the transition to the new lights, we would replace the pull switches with touch switches that require less maintenance, thus resulting in further savings.

E. Is this funding request for a One-Time need or an Ongoing need (**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.

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

Gabrielle Vitale

Prepared By (Name of Contact for Student Organization)

Date 11/16/18

Todd Pignataro

Reviewed By (Name of Appropriate University Official)

Date 11/16/18

Denny Cochrane, Director of Sustainability

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

Date 2/28,2019

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Contact Email Address	johns6@vt.edu
Contact Telephone Number	240-606-5213

Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

This initiative aims to utilize funding for the replacement of sink fluorescent lights in all 112 dorm rooms in **Barringer Hall** for energy-efficient LED lights. The payback period was calculated to be **13.5 years**. Switching current sink lights for LED lights would not only improve light efficiency, but also reduce greenhouse gas emissions. GHG emissions associated with sink lights in Barringer were calculated to be close to 5,500 pounds lower if LED lights were implemented.

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

This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing sink lights in Barringer, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by a calculated 5,392.77 pounds CO₂ per year and help further progress reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

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

The initial cost of this proposal is \$19,600. This cost includes price for the light (manufacturing, shipping), as well as labor. All 224 individual lights would have an estimated collective cost of \$11,200, and labor would cost \$8,400 with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.

Savings for the university per year would come out to \$1,455.46 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, approximately 5,392.77 pounds (2.7 tons) of CO₂ would be prevented from emitting to the atmosphere in a school year. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout	11/15/2018
Prepared By (Name of Contact for Student Organization)	Date
Reviewed By (Name of Appropriate University Official)	Date
Reviewed By (Name of Office of Energy and Sustainability Representative)	Date

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Contact Telephone Number	240-606-5213

Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

This initiative aims to utilize funding for the replacement of sink fluorescent lights in all 93 dorm rooms in **Johnson Hall** for energy-efficient LED lights. The payback period was calculated to be **13.5 years**. Switching current sink lights for LED lights would not only improve light efficiency, but also reduce greenhouse gas emissions. GHG emissions associated with sink lights in Johnson were calculated to be close to 4,500 pounds lower if LED lights were to be implemented.

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

This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing sink lights in Johnson, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by a calculated 4,477.93 pounds CO₂ per school year and help further progress the goal of reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

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

The initial cost of this proposal is \$16,275. This cost includes price for the light (manufacturing, shipping), as well as labor. All 186 individual lights would have a collective cost of \$9,300 and labor would cost \$6,975 with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.

Savings for the university per year would come out to \$1,208.55 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, approximately 4,477.93 pounds (2.24 tons) of CO₂ would be prevented from emitting to the atmosphere. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout

11/15/2018

Prepared By (Name of Contact for Student Organization)

Date

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Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

This initiative aims to utilize funding for the replacement of sink fluorescent lights in all 113 dorm rooms in **Miles Hall** for energy-efficient LED lights. The payback period was calculated to be **13.5 years**. Switching current overhead lights for LED lights would not only improve light efficiency, but also reduce greenhouse gas emissions. GHG emissions associated with sink lights in Miles were calculated to be about 5,500 pounds lower per school year if LED lights were to be implemented.

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

This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing sink lights in Miles, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by a calculated 5,440.92 pounds of CO₂ per year and help further progress reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

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

The initial cost of this proposal is \$19,775. This cost includes price for the light (manufacturing, shipping), as well as labor. All 226 individual lights would have a collective cost of \$11,300, and labor would cost \$8,475 with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.

Savings for the university per year would come out to \$1,468.46 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, about 5,440.92 pounds (2.72 tons) of CO₂ would be prevented from emitting to the atmosphere. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout

11/15/2018

Prepared By (Name of Contact for Student Organization)

Date

Reviewed By (Name of Appropriate University Official)

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Date

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Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

This initiative aims to utilize funding for the replacement of sink fluorescent lights in all 140 dorm rooms in **Newman Hall** for energy-efficient LED lights. The payback period was calculated to be **13.5 years**. Switching current sink lights for LED lights would not only improve light efficiency, but also reduce greenhouse gas emissions. GHG emissions associated with sink lights in Newman were calculated to be almost 7,000 pounds lower if LED lights were implemented.

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

This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing sink lights in Newman, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by a calculated 6,740.97 pounds CO₂ per year and help further progress reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

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

The initial cost of this proposal is \$24,500. This cost includes price for the light (manufacturing, shipping), as well as labor. All 280 individual lights would have a collective cost of \$14,000, and labor would cost \$10,500 with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.

Savings for the university per year would come out to \$1,819.33 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, approximately 6,740.97 pounds (3.37 tons) of CO₂ would be prevented from emitting to the atmosphere. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout

11/15/2018

Prepared By (Name of Contact for Student Organization)

Date

Reviewed By (Name of Appropriate University Official)

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Date

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Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

This initiative aims to utilize funding for the replacement of sink fluorescent lights in all 116 dorm rooms in **Eggleston Main Hall** for energy-efficient LED lights. The payback period was calculated to be **13.5 years**. Switching current sink lights for LED lights would not only improve light efficiency, but also reduce greenhouse gas emissions. GHG emissions associated with sink lights in Eggleston Main Hall were calculated to be close to 5,600 pounds lower per school year if LED lights were implemented.

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

This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing sink lights in Eggleston Main Hall, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by a calculated 5,585.37 pounds CO₂ per year and help further progress reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

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

The initial cost of this proposal is \$20,300. This cost includes price for the light (manufacturing, shipping), as well as labor. All 232 individual lights would have a collective cost of \$11,600, and labor would cost \$8,700 with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.

Savings for the university per year would come out to \$1,507.44 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, 5,585.37 pounds (2.79 tons) of CO₂ would be prevented from emitting to the atmosphere per school year. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout

11/15/2018

Prepared By (Name of Contact for Student Organization)

Date

Reviewed By (Name of Appropriate University Official)

Date

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

Date

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Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

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

This initiative aims to utilize funding for the replacement of sink fluorescent lights in all 102 dorm rooms in **Eggleston West** for energy-efficient LED lights. The payback period was calculated to be **13.5 years**. Switching current sink lights for LED lights would not only improve light efficiency, but also reduce greenhouse gas emissions. GHG emissions associated with sink lights in Eggleston West were calculated to be about 5,000 pounds lower per school year if LED lights were implemented.

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

This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing sink lights in Eggleston West, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by a calculated 4,911.27 pounds CO₂ per school year and help further progress reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

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

The initial cost of this proposal is \$17,850. This cost includes price for the light (manufacturing, shipping), as well as labor. All 204 individual lights would have a collective cost of \$10,200, and labor would cost \$7,650 with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.

Savings for the university per year would come out to \$1,325.51 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, approximately 4,911.27 pounds (2.46 tons) of CO₂ would be prevented from emitting to the atmosphere. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout

11/15/2018

Prepared By (Name of Contact for Student Organization)

Date

Reviewed By (Name of Appropriate University Official)

Date

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

Date

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Part II- Project Cost Information

Estimated Cost of this Proposal See III.C. below

Estimated Savings - See III.D. below

Net Cost of this Proposal =

Part III- Supporting Information

A. Please describe your sustainability initiative and attach supporting documentation.
 This initiative aims to utilize funding for the replacement of sink fluorescent lights in all 38 dorm rooms in **Eggleston East** for energy-efficient LED lights. The payback period was calculated to be **13.5 years**. Switching current sink lights for LED lights would not only improve light efficiency, but also reduce greenhouse gas emissions. GHG emissions associated with sink lights in Eggleston East were calculated to be close to 1,850 pounds lower per school year if LED lights were implemented.

B. How does this initiative help to achieve the goals of the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan?
 This initiative will help achieve many of the goals outlined in the Virginia Tech Climate Action Commitment Resolution and Sustainability Plan. Virginia Tech has potential to be a leader in campus sustainability. By replacing sink lights in Eggleston East, money and energy would be saved, as well as GHG emissions being offset without compromising needs of future generations (*Goal 1*). Replacing current lights for LED lights would reduce greenhouse gas emissions by a calculated 1,829.69 pounds CO₂ per school year and help further progress reducing GHG emissions to 80% below 1990 emission levels by 2050 through actions like improved energy efficiency (*Goal 3, Goal 4*).

C. What is the cost of your proposal? Please describe in adequate detail the basis for your cost estimate.
 The initial cost of this proposal is \$6,650. This cost includes the price for the lights (manufacturing, shipping), as well as labor cost. All 76 individual lights would have a collective cost amounting to \$3,800, and labor would cost \$2,850 for instillation with the assumptions that four fixtures could be installed in an hour and labor costs \$150/hour. (1 fixture = 2 lights)

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.
 Savings for the university per year would come out to \$493.82 per year, which would be reflected on the electricity bill. Additional savings would include CO₂ offset. By converting to lower-wattage LED lights, approximately 1,829.69 pounds (0.91 tons) of CO₂ would be prevented from emitting to the atmosphere. Those GHG savings would help to improve overall environmental quality.

E. Is this funding request for a One-Time need or an Ongoing need (**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

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE PROPOSAL FORM (Continued)

Part IV- Requestors/Reviewers

John Stout

11/15/2018

Prepared By (Name of Contact for Student Organization)

Date

Reviewed By (Name of Appropriate University Official)

Date

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

Date

STUDENT ORGANIZATION SUSTAINABILITY INITIATIVE FUNDING PROPOSAL CONTACT LIST

In the preparation of your Green RFP form, we encourage student organizations to seek input and guidance from the following list of university employees. These individuals are familiar with the form and the process. They can address the feasibility of your proposal, can provide a technical review, and can evaluate the cost & potential savings.

Area of Expertise	Name	Title	Email Address
Energy Management	Ruben Avagyan	Campus Energy Manager	rubena@vt.edu
Facilities: Housing & Residence Life	Todd Pignataro	Associate Director of Facilities	ptodd@vt.edu
Facilities: Buildings & Grounds	Jim McDaniel	Project Coordinator	jmcdani@vt.edu
Water Bottle Refill Stations			
Exterior Lighting	Bob Dellinger	Assoc. Director, Utilities	rdelling@vt.edu
Student Engagement & Campus Life	Eric Margiotta	Association Director	margiotta@vt.edu
Dining Services	Anthony Purcell	Assistant Director	purcella@vt.edu
Alternative Transport (Bike, Bus, Walk, etc.)	Jeri Baker	Director, Parking & Transportation	jab518@vt.edu
Landscape Architect	Bob Massengale	Site Planner	rmassen@vt.edu
Hahn Horticulture Garden	Scott Douglas	Director/Instructor	dsd1@vt.edu
Recycling	Denny Cochrane	Sustainability Program Manager	denniscc@vt.edu
Miscellaneous	Karlee Siepierski	Campus Sustainability Planner	Skarlee3@vt.edu