

# TRU Performing Arts Sustainability Grant Fund Proposal

## Project Description and Articulation of Benefits:

Proposal is for a LED retrofit of the theatrical lighting equipment in the TRU Actor's Workshop Theatre. This is a power saving initiative that would drastically lower the energy consumption of the Department. A current standard theatrical light uses a 575w-1000w bulb, The proposed LED fixtures are rated at 175w. This will result in a huge energy savings for the University as a whole. A full retrofit could turn the 175kWh or more spent per show down to only 40kWh.

66 fixtures of our current inventory can be upgraded to LED through a new retrofit kit called *Source 4wrd* but at the moment these are already our most efficient lights at only 575W. The more pressing concern and the first phase of this inventory overhaul should be with the outright replacement of our 49 lighting fixtures that currently run 750W-1000W bulbs, waste more energy, burn out bulbs more quickly and burn more gel. Most of these older fixtures were made in the 1970's and are in desperate need of replacement not only to more energy efficient modern counterparts but also to ease the burden and cost of constant repair and upkeep that they require.

The switch to LED would also cause a lot less waste in the form of burnt out gels (the coloured plastic we put in front of lights to change their colour) and in expensive custom bulbs that the theatrical lights take. The current tungsten incandescent bulbs cost approx \$17 each and we burn out and replace 30 or more per year. Gel that we burn through is approx. \$2 per cut and we burn through upwards of 75 cuts a year. This would result in both less garbage in landfills and also approx. \$660 in immediate savings to the department each year that we could instead filter into our theatrical productions.

These advantages both economically and ecologically would give us the ability to advertise our green theatre and give the arts dept a huge boost in social opinion as well as in our ability to recruit technically and environmentally minded students to the department of visual and performing arts.

## People, Partnerships, and Performance Measurement:

Travis Hatt – TRU Performing Art Technical Co-Ordinator and Project Lead

Robin Nichol – TRU Visual and Performing Arts Chair – Department/Project Liaison

Rebeka Binder – TRU Performing Arts Student – Student/Project Liaison

Aside from the social, economic and ecological benefits this project will also greatly benefit the students and the TRU Actors Workshop Theatre productions. The students of the performing arts program will gain the ability to work with much more recent technology and give them a better learning experience when it comes to technical theatre and more specifically lighting for the theatre. The AWT productions will greatly benefit from the improved flexibility that LED lighting can present from the aspects of lighting design and technical approach.

**Level of Impact:**

This is a project that although begun by staff member Travis Hatt has garnered the support and participation of many students from the department of performing arts. The ability to not only save energy but also improve the learning environment for students of technical theatre in the department is a very exciting and welcome thought. Not only will the savings on electricity and cost of bulbs and gel be beneficial to both the school and the environment but the advantage to learning on more current theatrical lighting equipment is of huge benefit to the students. Currently the aspects of LED technology in theatre are taught only in theory as the department does not own any of these fixtures that are quickly becoming the industry standard and the ability to actually learn on these lights will put our graduates into a better position to find work in the industry after leaving TRU.

On top of this, there is the benefits to the Actors Workshop Theatre to have more flexibility and room for artistic expression with the lighting of the space which will add significantly to the learning experiences for all in the shows as well as the spectacle afforded to our audiences.

**Project Feasibility:**

In our pre-proposal we estimated the total cost of a retrofit to be \$400,000. Since that time there have been some new products released that will allow for a significant amount of our lighting fixtures to be retrofitted rather than replaced and with current quotes we believe that the project could be done in its entirety for between \$175,000 and \$200,000 at most (with the fluctuating Canadian dollar as theatrical suppliers deal in American funds), please see attached budget. This has already greatly increased the feasibility of this project and we hope that this grant can help us to fund the first stage of this retrofit. We have begun to look into alternate methods of payment for secondary and tertiary stages of the project and hope to complete this inventory retrofit over the next 5 years.

Our project team is more than capable of completing this entire retrofit with ease using our current infrastructure as a framework. Our project lead, Travis Hatt, has worked as a theatrical lighting designer and technician for more than a decade and is more than qualified to perform all work required for this project. As this is a project dedicated to replacing theatrical lighting fixtures that are in their very nature temporary and movable it is a simple thing to replace the oldest fixtures. As for the fixtures that we are hoping to upgrade with retrofit kits, these kits are designed to be a simple switch over requiring only a wrench and a screwdriver and approximately 14 seconds to complete the conversion per fixture (according to the product website: <https://www.etconnect.com/S4WRD/>). This means the our project contains no hidden labor costs of any kind as the full conversion will take less time than the standard maintenance on our current fixtures.

**Planning:**

This project requires no permissions or ongoing funds from the department, in fact with every lighting fixture we replace the immediate costs of bulbs and gels for those fixtures will simply disappear thus saving the department money immediately on top of the energy savings of the project. Our department has an annual operating budget of only \$2,500. We currently have an average yearly expenditure of closer to \$10,000 for our theatrical productions. We currently make up this discrepancy through our box office. We currently are just barely covering our expenses with 75% of them being covered by our theatrical income. We are in need of this grant to start these lighting upgrades as we are simply not able to begin this project on our own.

**YouTube Video:**

Our YouTube project video can be found at <https://www.youtube.com/watch?v=1RwDUibXdJ0>