

**Project:** LED Lights in Balch

**Name:** Brian Lilienthal

**School:** Arts and Sciences

**Role:** Faculty

**Description:** I would like to replace incandescent based theatrical lighting fixtures in the Balch Arena Theatre with long-life, energy-efficient LED based lighting fixtures. We are already starting to move in that direction, but are lacking the funding to make a significant impact. I would start by replacing our PAR64 fixtures (18 total which use 1000watts per fixture), and our ETC Source4 PAR fixtures (16 total which use 750watts per fixture) with ETC ColorSource PAR fixtures (34 total which use 90watts per fixture). The current total load of the incandescent fixtures is 30,000watts. The total load of the LED based fixtures is 3,060watts. The next step is to start the replacement of our Ellipsoidal Reflector Spotlights (6 total which use 750watts per fixture) with ETC Source4 LED Lustr series 2 fixtures (6 total which use 171watts per fixture). Replacing these fixtures would reduce our load from 4,500watts (incandescent) to 1,026watts (LED)

**Budget:** PAR64 and ETC Source4 PAR replacement=\$25,000.00 Ellipsoidal Reflector Spotlight replacement=\$13,500.00 Labor=\$300.00 These numbers may come down when the bid process starts.

**Timeline:** 1. Obtain bids from three different vendors. (approx. 14 days) 2. Order all fixtures. (approx. 3 weeks including delivery) 3. Process new fixtures, and deploy into active use (approx. 6-8 hours)

**People Involved:** I would work within my home department (Theatre, Dance, and Performance Studies) with the help from students within the department.

**Benefit to Tufts Community:** This project would save the Tufts community quite a bit in energy savings. The Balch Arena Theatre is used for many performances and special events throughout the academic year, and also is in use for quite a bit of the summer during the Magic Circle summer camp for children.

**Note:** this project is preferred to the LED lighting lab