

**Green Fund Project
Final Report**

This report may be published on the SIU Sustainability website.

Project Title: MCM Filmmakers United, Cinema LED Lighting Project
ID #: 16SP118

Award Date: 4/22/16
Completion Award: N/A
Total Funds Used: \$22,071.95

1. Please provide a write up of your project/project experience.

In the Fall of 2016, MCM: Filmmakers United (MCM) used funds earned from the Sustainability Council's Green Fund grant to acquire three advanced cinema LED lights and an inverter power generator and transformer distribution module. We planned to use this equipment on various short narrative film productions in the last half of the Fall and the entire Spring 2017 semesters. The equipment arrived in October. In total, 3 of the 6 film productions in which the equipment was available, utilized the entire new LED and Generator system. The LED lights were utilized in all 6 productions, which reduced our dependency on checking out lighting kits, primarily reserved and prioritized for course-related assignments.

Jordan and Antonio held a workshop to inform MCM's members about the new equipment and the new safety hazards that would be present on future sets. We also always used a grounding rod with the generator to ensure utmost safety, and this is something we demonstrated on each set. Once production with the new system began, MCM's senior-level lighting crew members and Antonio instructed new members how to power and safely operate the lights and generator on set. The availability of a portable powering system and LED lighting allowed for the following advantages:

- Greater flexibility in choosing locations to film. Prior to having access to a generator, if MCM wanted to film at a remote location, it would need to bring battery powered lights, which are by nature smaller and less powerful. Now we can set up with advanced lights, even if we are in a parking lot or a field. This allows us to expand the scope of our storytelling.
- A safer production set. LEDs eliminate potential dangers that come from using incandescent lights. They can get very hot, and have wiring that is older and

riskier to expose to outdoor climate. They also can lead to talent and crew members overheating when filming in smaller, more intimate environments.

- More efficient production. Older equipment MCM has used in the past tends to be very noisy. Noise is also a problem when fan units are set up to cool down old lights. Working around this makes it harder to produce good audio. The new equipment is quiet and makes for faster, more productive sets.
- Less energy required to power set- Discussed in the results below

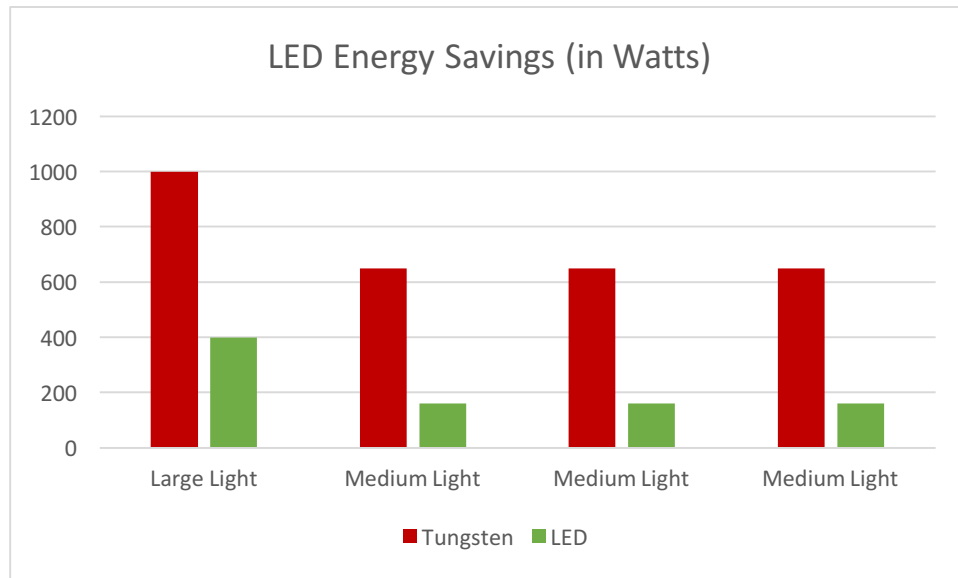
2. **Please provide a summary of your results (environmental, social, and/or economic) including quantifiable data as appropriate (ex. # of individuals reached, lbs. diverted from landfill, energy saved, etc.).**

Environmental: Energy Wattage Saved compared to Tungsten Lights.

On average, a production set with 4 incandescent lights would total 2950 watts. This can be broken down to a 1000w tungsten and three 650w tungsten lights. On average, we shoot in one location for about five hours. Therefore, in the old system, 14,750 watts of energy would be consumed.

The nominal wattage of the Arri L-10 is 400W, the Arri L-7 uses 160. Though these lights are powerful and bright enough where we never needed to use all of them at the same time, for comparison purposes, the total wattage would be 880. That is 2,070 fewer watts than if we were to continue using our older incandescent lights. For a five-hour shoot, the new system puts us at 4,400 watts of energy. Amazingly, that is more than 10,000 less watts of energy than used before! And again, we never needed to use a four light set-up like we did in years past.

As mentioned earlier, incandescent lights are known to get very hot. These wattage calculations don't reflect the air conditioning/fan unit energy required to cool down set. For example, the average medium-sized window AC unit eats up 900 watts. LED's don't require a cooling system.



Social: The LED and generator combo pack reduced conflict between RSOs and faculty vying over limited equipment resources in the College's equipment room. The Green Fund has allowed MCM to become more autonomous and more effective in carrying out scheduled productions, without the worry of productions being cancelled or postponed due to lack of equipment. MCM has experienced zero conflicts with faculty over the use of equipment during this past school year, in comparison to at least four instances last year before beginning the LED project.

After the school year is finished, MCM will evaluate its films and decide which ones are worthy enough of investing in submitting to festivals. With the help of this exposure of around the state and region, we look to grow the filmmaking community at SIU and in the Carbondale area.

Economic: Though it may not sound like a substantial saving, we saved \$5.79 during the shoots we chose the generator over Ameren power during three of our films. This sum was calculated by converting the average wattage listed above of our past lighting system to kilowatts, then multiplied by Ameren's prices from the specific dates and times we filmed on. By using the generator, we did not rely on Ameren. We expect the \$5.79 saving to grow over the long lifespan of this equipment.

3. **Summarize how your project promoted the Green Fee/Sustainability on campus including, but not limited to, flyers created, screenshots of website, signage, etc. Please include website links, if applicable.**

At the Spring 2016 Red Carpet Premiere, we publicly announced the good news of receiving the Green Fund grant and educated the attending audience on how the funds

would be utilized. We are planning to advocate, again, publicly at the 2017 Red Carpet Premiere, and reveal the results included in this report. Also, at the end of every film which utilized the LED lights and/or generator, we attribute the Green Fee and the Sustainability Council in the credits with the identifier. We plan on submitting some of these films into film festivals around the Midwest and possibly farther, which will give the Sustainability Council outside of Carbondale. And we will promote this partnership at any event we have the chance, as well as RSO Fairs where we promote MCM.

Below is the identifier we applied to the transformer. We refrained from applying one to the generator for safety reasons, but the transformer does not heat up so this location works well. Anybody can easily see this identifier should they visit one of our film sets.



4. **Is there anything you would do differently if you were to do a similar project in the future? If so, please describe.**

After all of our equipment finally arrived, we immediately were faced with a challenge that we hadn't prepared for- transporting the bulky generator and transformer. Luckily, we have a few members with larger vehicles that helped us out, but it became a little tricky to rely on their availability. Another obstacle we learned of soon after our first

shoot with the generator was that we would no longer be allowed to store it inside of the College of Mass Communications. This was a safety hazard and a completely understandable situation, and it was our mistake that we had not vetted this prior to obtaining the equipment. Fortunately, WSIU allowed us to keep the generator in their fenced-enclosure behind the college, where it was locked away from and safe.

With every large project such as this, there is bound to be at least one curveball. We will definitely take into account what we learned in these situations when we apply for future projects.

- 5. Please attach a minimum of 5 digital images –these will be images used to promote interest in sustainability projects on campus. These can be photos of the progress of the project or the completed project.**

(Photos attached at end of report)

- 6. Optional: Do you have any suggestions for the SIU Sustainability Council to improve the Green Fund Award Process?**

No. We have thoroughly enjoyed our experience working with the Sustainability Council. Everybody has been professional and we are grateful to them for sharing our vision of sustainable, student filmmaking at SIU. We look forward to partnering again on future projects!

(Photos on Next Pages)

















