

ENERGY CASE STUDY

ORPHEUS MUSICAL THEATRE SOCIETY

In 2016, ArtsBuild Ontario offered a one-time grant for energy conservation projects, as part of our [Energy Conservation Program](#). We were pleased to offer the grant to eight arts organizations, all taking on a new renovation or project that would result in lowering their monthly energy use.

One of our grant recipients was Orpheus Musical Theatre Society. Orpheus completed a retrofit of approximately 150 fixtures throughout the building, converting almost the entire facility to LED. Facilities Manager Murray Doggett gave us the scoop on how this volunteer-run organization managed the project and how the new lighting and energy savings impact their facility.

WHY TAKE ON A LIGHTING RETROFIT PROJECT?

Orpheus Musical Theatre Society is a not-for-profit charitable organization and the second-longest running organization of its kind in North America. Presenting musical theatre since 1906, Orpheus owns and operates an 11,000 square foot rehearsal studio and workshop, with a 140-year-old church making up the main part of their facility.

Orpheus had an energy audit completed that identified their fluorescent lighting as a potential source of energy savings and the ArtsBuild Energy Conservation grant became a kick-starter for a larger lighting retrofit.



Orpheus' Rehearsal Hall

Orpheus' project saw approximately 150, 4-ft. double bulb lighting fixtures transitioned to LED. Orpheus had initially planned to only transition a few fixtures, using only the funds provided by the ArtsBuild grant. However, after a discussion with their Board about the potential energy savings that could be seen with a larger project and the incentives available from local hydro, Orpheus decided to jump in with both feet and the project evolved into a \$17K undertaking.

Combined with the ArtsBuild grant, Orpheus was able to access around \$3,500.00 in incentives through local utility Ottawa Hydro, leaving approximately \$11K to pay out of pocket. Orpheus funded the remainder of the project with a capital reserve fund nurtured with dollars from ticket sales. "We don't do a lot of sponsorship and our membership dues are very small," Murray tells me, "so almost

everything we do comes from ticket sales and our very loyal Angels [donors of \$100.00 or more per year]”

This reserve fund gave Orpheus the ability to grow their project without outside fundraising or additional requests to funding bodies. Growing the project allowed them to realize more significant energy savings and a shorter payback period.

OVERALL SAVINGS ON ENERGY AND COSTS

In just six months after completing the project, Orpheus saw an overall difference of 5,740 kWh and over \$1,000.00 in energy savings. Their estimated payback period for the entire lighting project is just over three years.

Aside from the significant reductions in energy use in their facility, Murray notes the dollar savings directly benefit their organization. “For our audiences, the money we don’t plow into heating or lighting our facility goes directly into operations for our shows,” says Murray, “it means we have more to spend on our theatrical productions.” For this volunteer-run theatre organization, every dollar saved means a dollar re-routed to improving their productions, enhancing the audience’s experience, and drives dollars from ticket sales back to the reserve fund that made the project possible in the first place.

IMPACT IN THE SPACE



Costume volunteers make alterations under new LED fixtures

to locate and work on the costumes, makes them look a whole lot better and makes our volunteers a lot happier.”

Along with the significant energy and dollar savings, the impact of improved lighting in the space has also been appreciated by Orpheus’ many volunteers and visitors. “As a volunteer organization, our volunteers were very quick to point out how good the lighting was,” says Murray, “and they hadn’t realized how dark it had been previously.” Two spaces in particular enjoyed the full benefit of the new lighting. Orpheus boasts a large costume department that houses their many production costumes. “That was one of the areas we saw a major change,” says Murray, “it makes it a lot more enjoyable

The other space that was significantly improved was their workshop space, a large bay with fluorescent lighting that flickered and often burned out. The lights are now much more forgiving and evenly distributed throughout these important working areas, a huge plus for Orpheus’ volunteers.

These behind-the-scenes spaces are not the only ones reaping the benefits of the new lighting. Other local groups frequent Orpheus' building. They rent out their facility to smaller theatre companies who use the space to both rehearse and stage productions, and have a theatre school running out of the space weekly. The space is also host to a congregation that uses the church hall on Sundays. The lighting project has improved the experience of Orpheus' many visitors.

Another major benefit Orpheus has seen is the maintenance around the new LED bulbs. "I just did a walk around the building in preparation for this interview," Murray explains, "and not a single light we installed has had any requirements for maintenance in well over a year." Anything that makes a volunteer-run facility more low maintenance is a huge benefit enjoyed by Orpheus' volunteers.

UPCOMING ENERGY PROJECTS

Along with their lighting project, Orpheus has made some additional improvements to their facility. Borne out of necessity, Orpheus replaced a 20-year old furnace with a newer model. This improvement lends itself to higher efficiency and as facilities age, replacements become an opportunity to enact energy saving measures. Consult your local providers about potential incentives that may accompany an upgrade to a higher-efficiency model.

When asked about the future, Murray refers back to the energy audit that identified the lighting project in the first place. "I'd like to see us improve our insulation as the building itself has some heat loss." During the energy audit, an infrared camera scan identified some key areas for improvement and that's where Murray sets his sights for next steps. These incremental steps all help Orpheus improve volunteer and visitor experience, reduce energy usage and reroute crucial dollars back into their productions and facilities.