

## Application for Sustainability Funds

### Alliant Energy Center

### Exhibition Hall High Speed Doors

Department: Alliant Energy Center	Total project costs: \$212,825
Address: 1919 Alliant Energy Center Way	Funding amount in current budget: \$0
Madison, WI 53713	Funding amount requested: \$212,825
Project Title: Exhibition Hall High Speed Doors	
Project Location: Exhibition Hall Loading Dock	
Project Description: This project will replace the four original 20'x20' exterior loading dock doors with energy efficient high speed doors. Because the existing doors open and close at such a slow speed, they are left in the upright position during show ingress and egress hours.	
<ul style="list-style-type: none"> <li>Assuming that the existing exterior doors are left open an average of two days per week for 8 hours each day, this project is estimated to save approximately 23,366 therms of natural gas and 20,261 kWh of electricity on an annual basis using the Ashrae Handbook of Fundamentals. For purposes of the savings calculations the doors are assumed to be open between the hours of 8 AM and 4 PM. Also, there is no savings assumed when the temperature is between 50 and 60 degrees.</li> <li>This project is estimated to result in annual heating cost savings of \$11,683.14 and air conditioning cost savings of \$2,836.50.</li> <li>The total annual energy savings is estimated to be \$14,519.64. This results in a payback period of approximately 14.5 years.</li> <li>This project should also result in decreased maintenance costs as well, but those savings are difficult to quantify. The manufacturer of the existing doors is no longer in business, making replacement parts very difficult to find. In most cases, replacement parts need to be custom fabricated.</li> </ul>	
The County could use the results of this project to estimate the savings related to replacing other slow speed exterior doors in other county-owned buildings.	
The outcomes of this project will be measured by savings in the Alliant Energy Center's gas and electric costs. Savings from this project will be difficult to measure given the annual changes in events held on campus. That being said, the overall number of events in Exhibition Hall that utilize the loading dock doors is relatively stable from year to year.	
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