

OPTIMIZED OPERATION OF INDOOR PUBLIC POOL FACILITIES

These field tests and energy simulations will help develop guides for efficient operation and recommissioning of indoor swimming pool facilities and quantify the achieved savings.

WHY THIS RESEARCH IS NEEDED

The energy use intensity for indoor pool areas is three times higher than most other areas within a building, but there are currently no comprehensive resources to guide technicians and recommissioning providers in the quality maintenance and operation of indoor pool facilities. Furthermore, the majority of indoor public pools in Minnesota are in hotels, motels or multifamily buildings, which have historically been rarely reached through recommissioning programs. Service providers cannot always research the specialty equipment, develop appropriate monitoring methods, and perform specialized savings calculations to the degree needed to fully realize the energy savings potential in indoor pool areas. There are also inadequate examples of field-proven, documented savings for pool area operational improvements for CIP program providers and technicians to draw upon for planning energy savings initiatives.

PROJECT PROCESS AND EXPECTED OUTCOMES

Staff have conducted field surveys and operator interviews for 30 facilities to define a common range of baseline characteristics for Minnesota indoor pool facilities. Now the project team is in the process of recommissioning six test sites that are representative of the characteristics and improvement opportunities identified in the field surveys and interviews. Detailed monitoring of the pre-existing operations has taken place over the first half of 2015, and we are working with technicians to complete appropriate equipment and operations improvements at the sites. We will continue detailed monitoring through the end of 2015 to verify energy savings for the operational improvements.



The project will use the results to develop energy savings calculators and quality maintenance and operations guides for two different audiences: technicians and recommissioning providers. Researchers will tailor each document to be used by its intended audience, considering existing knowledge of the equipment. They will evaluate the market acceptance and effectiveness of the guides through pilot testing with a variety of pool service technicians and recommissioning providers. Feedback from these initial trials of guide use will be used to refine the guides.

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PROJECT SUMMARY



Objectives

Quantify the savings potential for energy efficiency improvements to the operations of indoor public pool facilities in Minnesota and develop guides to help technicians and recommissioning agents identify and realize these savings.

Utility Implementation

The guides and aids in estimating savings will make it easy for these savings to be achieved through existing CIP rebate programs, such as recommissioning and custom rebates, and will provide information that utilities can use to develop new prescriptive rebates.

Scope

Based on surveys completed at 30 facilities, 6 representative sites are being recommissioned with detailed monitoring of operational energy savings. Training will be provided to 12 technicians and 2 recommissioning providers.

Timeline

January 2014 to December 2016

Non Energy Impacts

A number of facilities will benefit from the prevention and/or correction of problems with air quality, comfort and accelerated building deterioration associated with moisture condensation.

This project supported in part by a grant from the Minnesota Department of Commerce, Division of Energy Resources through the Conservation Applied Research and Development (CARD) program.