

## COOL SAVINGS IN MINNESOTA'S LARGE REFRIGERATION SYSTEMS

The refrigeration systems in grocery stores, food processing facilities, cold storage warehouses, and ice arenas use about one-eighth of the total electricity consumed by commercial and industrial buildings in Minnesota. However, those buildings do not see commensurate utility program energy savings, which are several times smaller for refrigeration-dominated facilities than for commercial and industrial buildings overall.

To help Minnesota utilities chip more savings off the old (ice) block, the Minnesota Department of Commerce, Division of Energy Resources, commissioned a project team to assess the potential to increase savings in the state's large refrigeration-dominated facilities through new measures and program approaches.

Through more than 60 in-depth interviews, 15 field visits, 10 utility program reviews, and 25 measure evaluations, researchers found that:

- Because refrigeration systems are typically assembled in the field, efficiency upgrades to their controls and operation have a significant energy impact relative to most other efficiency options for individual pieces of equipment.
- A very small number of specialized contractors have an outsized influence on the efficiency of most large refrigeration systems in Minnesota.
- Current utility refrigeration programs focus primarily on new equipment for grocery stores, and they could cost-effectively triple their savings by more aggressively promoting the optimization of existing refrigeration systems in all sectors of the market.

The study provides specific recommendations for utility initiatives to achieve greater savings, including:

- Conduct frequent, personal outreach to the few, key refrigeration contractors.
- Aggressively promote optimization of existing refrigeration equipment through contractor engagement and technical assistance from refrigeration efficiency experts.
- Simplify the rebate process for at least 15 of the efficiency measures detailed in the report.

These steps could achieve nearly 9 GWh of savings per year on top of what utility programs are already accomplishing.

Read the full report, "Commercial and Industrial Refrigeration Market Assessment," at [mncee.org/comm\\_refrigeration](http://mncee.org/comm_refrigeration)

The biggest opportunity to increase savings across all commercial and industrial refrigeration facilities is optimizing control of existing systems through services like recommissioning. The remote data-capture capabilities of most system controllers can be used to make this more cost-effective and successful.



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