



Board Workshop / Discussion Agenda

15 West Kellogg Blvd.
Saint Paul, MN 55102
651-266-9200

October 1, 2024 - 10:30 a.m.

Courthouse Room 220

WORKSHOP

1. **Arena Energy Savings Program**

[2024-193](#)

Sponsors: Parks & Recreation



Board Workshop / Discussion

Request for Board Action

15 West Kellogg Blvd.
Saint Paul, MN 55102
651-266-9200

Item Number: 2024-193

Meeting Date: 10/1/2024

Sponsor: Parks & Recreation

Title
Arena Energy Savings Program

Attachment
1. Presentation



Arena Energy Savings Program

Parks & Recreation

October 1, 2024

Agenda & Goals

Introductions

- Mark McCabe, Parks & Recreation Director.

Goals

- Update the board on energy savings program since Parks & Recreation's February workshop.
- Obtain board endorsement on pursuing next steps with the energy savings program.

Background

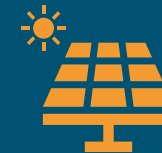
- Arenas consume 85% of the energy utilized in Parks & Recreation facilities.
- Parks has been exploring ways to reduce energy consumption in arenas, and to produce clean energy.
- The Climate Equity Action Plan includes goals focused on clean energy and efficient buildings.
- Unique opportunity to decrease energy usage, produce clean energy, leverage federal resources, and advance energy goals.



Inflation Reduction Act (IRA) – Clean Energy Opportunity

- IRA provides funding for investing in clean energy production.
- Aldrich Arena and the Fieldhouse at TCO Sports Garden can support solar arrays.
- Parks is seeking to secure the services of Baker Tilly consultants to assist in obtaining an IRA credit.

Solar projects are eligible for an IRA credit



Value of credit is estimated to be

\$1,382,000

(30% of the solar array cost)

Ramsey County Energy Goals

Climate Equity Action Plan

- Pursue carbon-free, electrical power through investments.
- Invest in infrastructure updates that reduce emissions and increase energy efficiency in county-owned buildings.

Performance Measures

- Goal to reduce total energy consumption by all Ramsey County owned buildings.



Energy Project Timeline Review

**November
2023**

Board approved Phase I project scope of work.



**February
2024**

Parks participated in board workshop



**March –
August 2024**

Due diligence period to evaluate potential refrigeration system replacement and energy savings.

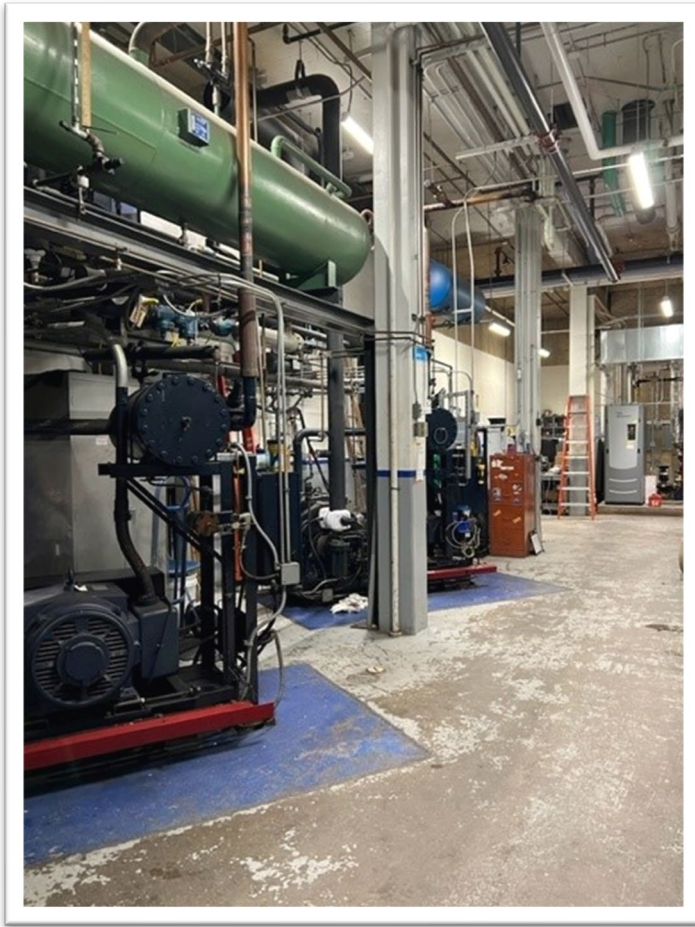


**August
2024**

A revised scope of work was finalized for Phase II energy savings program.



Due Diligence - Refrigerant Replacement Exploration



- Parks evaluated whether refrigeration system conversion could be accomplished through the energy savings program.
- It was determined that replacing refrigeration systems through the energy savings program was not a viable option.
- Parks will need to solve for refrigeration system replacement outside of the proposed energy savings program. A future board workshop or discussion will be scheduled to review the refrigerant issue.

Due Diligence – Energy Savings and Production Opportunities

- A site-by-site visit and facility evaluation was conducted verifying energy savings opportunities.
- Several opportunities exist to reduce energy consumption as well as produce clean energy.
- Honeywell created a proposed scope of work that concentrates on areas of greatest opportunity for energy use reduction and clean energy production.



Phase II Proposed Scope Of Work

	Aldrich	Highland	TCO Sports Garden	Oscar Johnson	Shoreview	West Side	White Bear Lake	Gustafson-Phalen	Harding	Pleasant	Parks Admin Offices
Refrigerant System Upgrades				X	X	X	x				
Convert to LED Lighting	✓	X	✓	X	X	X	X	X	X	X	✓
Replace Gas Furnaces with High Efficiency Units						X	X				X
Replace Condensers											X
Building Management System Controls				X	X	X	X				X
Zoned Energy Monitoring	X		X	X	X	X	X				
Energy Measurement and Verification	X	X	X	X	X	X	X	X	X	X	X
Building Envelope - improve insulation, reduce heat escape		X		X	X	X	X	X	X	X	
Install Solar Panels	X		X								

✓ Completed
 X Planned

Key Benefits of the Project

- Projected electricity reduction of 25% across the arenas and Parks administration building.
- Projected propane reduction of 5% in buildings.
- Annual production of an estimated 1.3 megawatts of clean energy from solar arrays.
- \$1.5 million of building improvements including mechanical systems, lighting, insulation, and readying arenas for refrigeration system conversions.
- Helps achieve Climate Equity Action Plan and Performance Measure goals.
- Leverages federal resources and savings from reduced energy utilization.



Project Financing

- Financing is needed to invest in energy savings and clean energy production.
- The Ramsey County Finance team is recommending utilizing the general fund fund balance to pay for the upfront capital investments.
- Parks & Recreation would utilize \$6.2 million from the county's general fund fund balance. This would be paid back over approximately 15 years utilizing funds saved through energy use reduction, an IRA credit, and solar production credits.

Project Financials

Overall Projected Costs and Savings	
Construction Costs	\$6,213,361
Total Projected Cost	\$6,213,361
Inflation Reduction Act Credit	\$1,382,178
Energy Savings	\$3,548,350
Additional Rebates (Lighting & Construction)	\$120,586
Solar Production Credits	\$1,162,247
Total Projected Credits and Savings	\$6,213,361

Next Steps with Energy Project

- Parks continues to work through contract negotiations with Honeywell.
- Parks would bring a Phase II agreement to the Board for approval including the recommended financing plan.
- Once the contract is executed, the construction process would commence and be completed in roughly 18 months.
- Parks would work with Baker Tilly and the county's finance team on obtaining the IRA rebate.



Open Discussion